# ASTRO

AstroJet 1000
Inkjet Printer
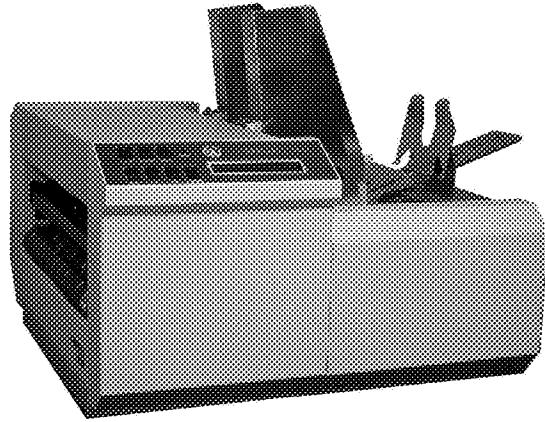
Installation, and Operating Manual

SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. HOWEVER, CERTAIN SAFETY RULES SHOULD BE OBSERVED WHEN OPERATING THE ASTROJET 1000 SYSTEM.

BEFORE USING THE PRINTER, YOU SHOULD READ THIS MANUAL CAREFULLY AND FOLLOW THE RECOMMENDED PROCEDURES, SAFETY WARNINGS, AND INSTRUCTIONS:

- ✓ Keep hands, hair, and clothing clear of rollers and other moving parts.

- ✓ Avoid touching moving parts or materials while the machine is in use. Before clearing a jam, be sure machine mechanisms come to a stop.

- ✓ Always turn off the machine before making adjustments, cleaning the machine, or performing any maintenance covered in this manual.

- ✓ Use the power cord supplied with the machine and plug it into a properly grounded wall outlet located near the machine and easily accessible. Failure to properly ground the machine can result in sever personal injury and/or fire.

- ✓ The power cord and wall plug is the primary means of disconnecting the machine for the power supply.

- ✓ DO NOT use an adapter plug on the line cord or wall outlet.

- ✓ DO NOT remove the ground pin from the line cord.

- ✓ DO NOT route the power cord over sharp edges or trapped between furniture.

- ✓ Avoid using wall outlets that are controlled by wall switches, or shared with other equipment.

- ✓ Make sure there is no strain on the power cord caused by jamming between the equipment, walls or furniture.

- ✓ DO NOT remove covers. Covers enclose hazardous parts that should only be accessed by a qualified service representative. Report any damage of covers to your service representative.

- ✓ This machine requires periodic maintenance. Contact your authorized service representative for required service schedules.

- ✓ To prevent overheating, do not cover the vent openings.

- ✓ Use this equipment only for its intended purpose.

In addition, follow any specific occupational safety and health standards for your workplace or area.

TABLE OF CONTENT

<u>Notes</u>

Section 1 – *Getting Acquainted*

ASTROJET 1000

The AstroJet 1000 is a high-speed printing and addressing systems that can print addresses, bar code, return addresses, bitmapped graphics, and special messages using TrueType scaleable fonts simultaneously on up to 20,000 postcard (3.5 X 5.5 inch) mail pieces per hour.
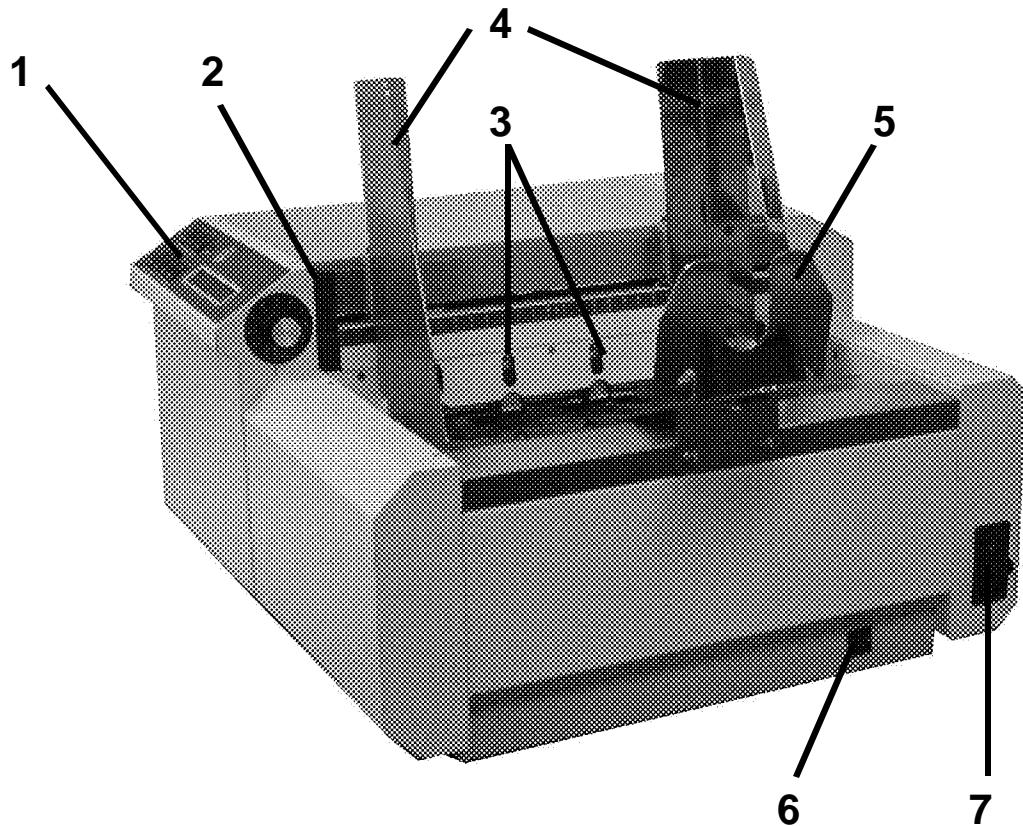
1	CONTROL PANEL – See page 3
2	SHEET SEPARATOR LOCKING LEVER – This lever locks and releases the sheet separators Item 3.
3	SHEET SEPARATORS – There are four sheet separators that help separate the media as it is being fed. (See Setting Up the Job page 6)
4	SIDE GUIDES – The side guides are used to maintain side to side registration.
5	REAR-GUIDE - The rear-guide is used to hold the media against the sheet-separators for proper feeding.
6	MOTOR CIRCUIT BREAKER – This circuit breaker protects the motor from overloads.
7	POWER RECEPTACLE – The power receptacle contains the main power switch and the fuses.

1	PRINT HEAD COVER – Shown open for illustration purposes, but should be in the closed position for running.
2	PARALLEL PORT – The printer cable from your computer should be connected here.
3	MEDIA TRANSPORT BELTS – The media is transported under the printheads on these belts.
4	PRINTHEAD CARRIAGE – The AstroJet 1000 has four printheads. Head 1, 2, and 3 are banked together on the rail. Head 4 shares the same rail, but is opposite and independent of the other heads. You can move the two printing banks from side to side to position the information properly on the media with the following restrictions. Heads 1, 2, and 3, print a band 1-1/2 inch wide and may be positioned anywhere within a range of 2-1/2 inches from the Control Panel side of the printer to 4 inches from the opposite side of the printer. Head 4 can be positioned to within 1-3/4 inches of head 3 and to within 2-1/2 inch of the non-operator side of the printer.
5	MEDIA SENSOR – The media sensor is located just before the printheads and senses the media to start the printing action.

CONTROL PANEL
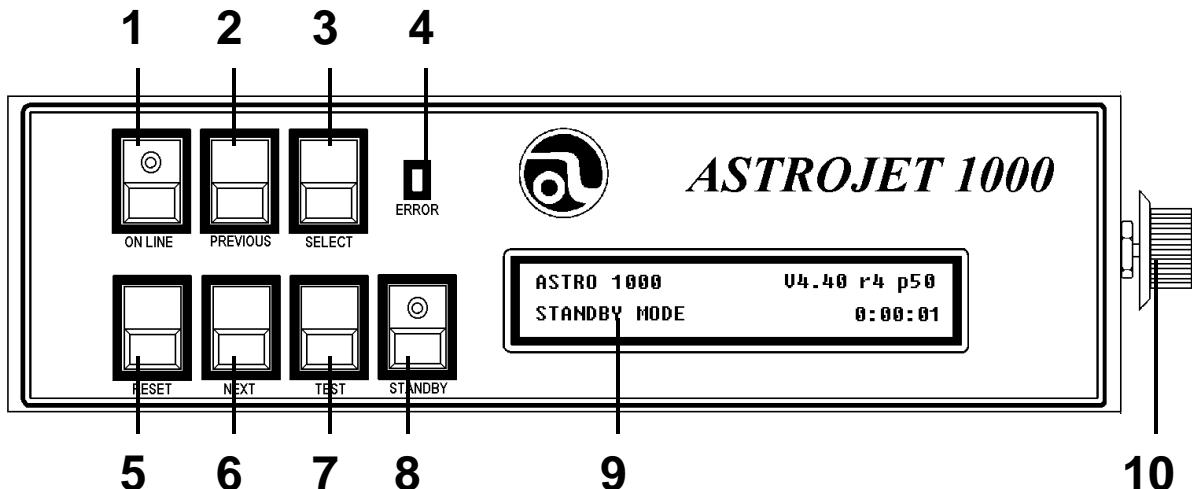
1	ONLINE – The indicator on this key lights when data is sent to the AstroJet 1000 and it is ready to begin printing. Turns the printer on and off line so that menu mode can be accessed. (See Printer Settings, page 26)
2	PREVIOUS – When the AstroJet 1000 is in the menu mode this key will scroll to the previous selection. When the selection is unlocked with the select key, this key will scroll through the selections available in the selected menu.
3	SELECT – In the print mode this key starts and stops the printing. In the menu mode it locks and unlocks the selection.
4	ERROR INDICATOR – When RED indicates a problem with the printing process.
5	RESET – This key does not function.
6	NEXT – When the AstroJet 1000 is in the menu mode this key will scroll to the next selection. When the selection is unlocked with the select key, this key will scroll through the selections available in the selected menu.
7	TEST – This key does not function.
8	STANDBY – Toggles the printer between the ON LINE and STANDBY modes. When the AstroJet 1000 is first turned on the indicator light shows the machine is ready to receive data.
9	OPERATOR DISPLAY – Indicates AstroJet 1000 status including menus and error messages. Any display readout indicates that the unit is ON.
10	MEDIA THICKNESS – The knob on the right side of the control panel is used to adjust the height of the print heads to compensate for different media thickness.

Notes

Section 2 – *Installing the AstroJet 1000*

To install the AstroJet 1000 printer the following must be done:

- Choose a location for the AstroJet 1000 Printer
- Plug in the printer and connect it to the computer
- Install the Inkjet Cartridges
- Set up the feed on the printer
- Install the AstroJet 1000 software on the computer
- Create a job to be printed (refer to Section 4 – *Software Tutorial*)

Choose a Location

The AstroJet 1000 should be placed on a sturdy worktable or cabinet at least 12 inches from any walls. Protect the AstroJet 1000 from excessive heat, dust, and moisture – avoid placing it in direct sunlight.

Connecting the AstroJet 1000

Plugging in the Printer

Make sure that the main power switch of the AstroJet 1000 Printer is in the OFF position.

1. Connect one end of the power cord to the rear of the AstroJet 1000 in the corresponding receptacle.
2. Plug the other end into a 115-220 Volt AC, 50/60 Hz. Grounded outlet.

CAUTION

Do not use an adapter plug or extension cord to connect the printer to the wall receptacle.

Do not use outlets controlled by wall switches.

Do not use an outlet that shares the same circuit with large electrical machines or appliances.
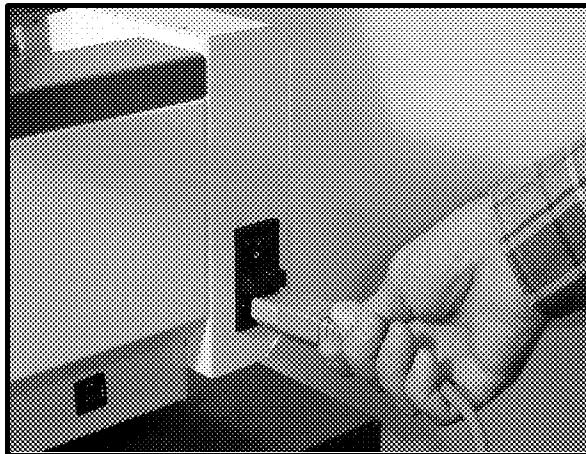
Connecting to the Computer

Plug the parallel printer cable from your computer into the rear of the printer and latch the two locking clips. **The cable used to connect the AstroJet 1000 to the computer must not exceed 6 feet long.**
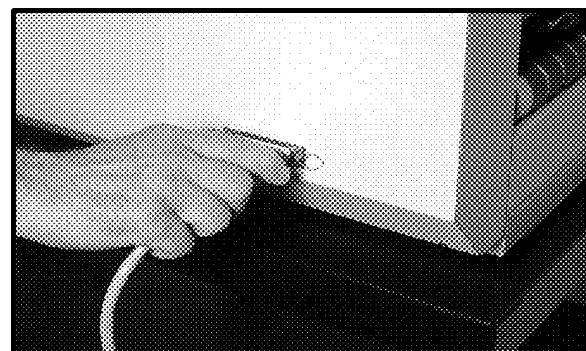
Install the Inkjet Cartridges

The AstroJet 1000 can be configured with 4 inkjet cartridges. The cartridges are installed as follows:

- Remove the inkjet cartridge from its packaging, taking care not to touch the copper contacts, the metal plate, or the gold printhead. Remove the protective tape from the printhead.

- The cartridges are held in place by a latch lever mounted on the inkjet cartridge holder. Release the lever by raising it vertical.

- With the cartridge's printhead pointing down, slide the cartridge into the holder and push down and toward the contacts in the holder.
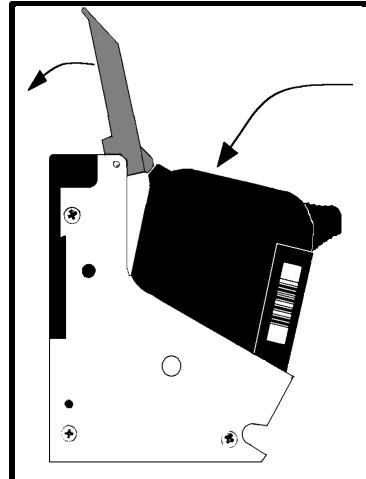
- Make sure the cartridge is seated in the holder then close the latch lever to secure the cartridge in the holder. Do not force the lever into place. (See the diagram.)

- Repeat the above for the remaining cartridges.

  NOTE: For optimum image quality during the run, refer to *"Cleaning the Printhead"* on page 34.

> **The ink in the cartridge may be harmful if swallowed. Keep new and used cartridges out of reach of children. Discard empty cartridges immediately.**
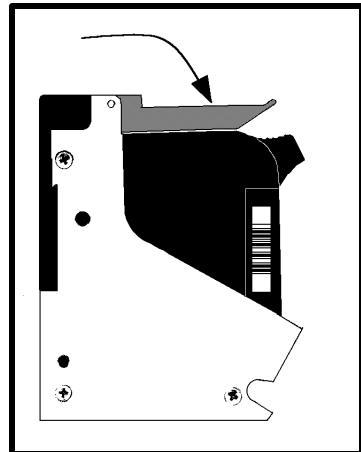
Setting up the Feed

1. Release the separator-locking lever located on the operator's side of the feeder and raise the separators to the up and locked position. Move the side guides out to their extreme open position. Place one piece of media in the center of the feed table.

2. There are four separators on the feeder. Use the two center separators for narrow media and all four separators for wide media. Place the media under the separators and lower the separators so that they rest on the media.

3. Rotate the locking lever up to lock the separators in place.
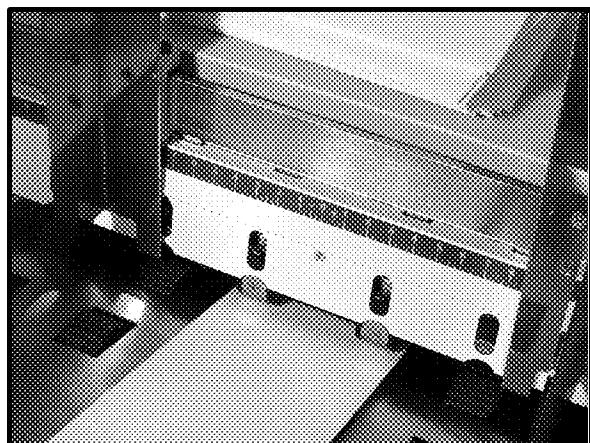
4. Adjust the side guides to within 1/32-inch of the media and set the back guide so that the media is raised approximately 1/2-inch and rests on the curve of the back guide. When running 10 inch or longer or heavy media you may have to set the back guide so that it just touches the back of the media.
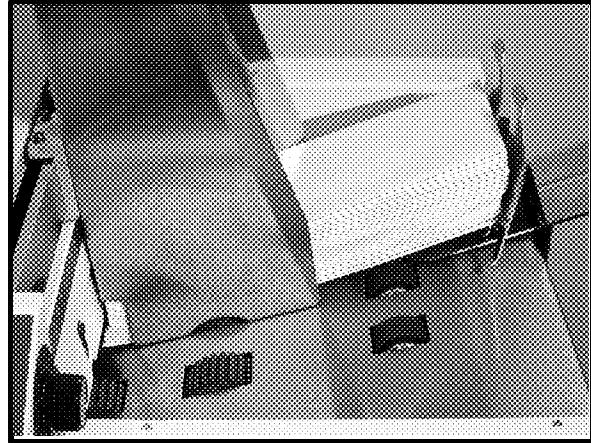
5. Turn the AstroJet 1000 on and then turn the media thickness knob to set the initial print head height as follows:

Media Thickness	Dial Setting
.004" to 1/32"	0 to 2
1/32" to 1/16"	2 to 3
1/16" to 1/8"	3 to 7
1/8" to 1/4"	7 to 10

NOTE: These are initial settings. It may be necessary to adjust the MEDIA THICKNESS control to optimize the print quality

6. Press the STAND BY key, and then press the SELECT key, to test feed media.

NOTE: The AstroJet 1000 is supplied with two types of sheet separators. The hard tip, which is installed on the unit when you receive it, is for media such as envelopes, books, and stuffed envelopes. A soft tip separator is packed with the machine for use with single sheets of paper and plain envelopes. Refer to Section 5 – *Maintenance* for instructions on how to change them.

Installing the Software on the Computer

The AstroJet 1000 is not supplied with a computer. The computer that you use with your AstroJet 1000 System should meet the following minimum requirements:

An IBM or Compatible Pentium 100 Megahertz PC or better.
Windows 95, 98, 2000 or NT installed.
A minimum of 20 Megabytes of free hard disk space.
The computer should be equipped with at least 16 Megabytes of RAM for Windows 95 and 98 (32 Megabytes of RAM required for Windows 2000 and NT).
A 2X CD ROM or better.
An 800 X 600 SVGA Monitor or better.
Parallel (Centronics) printer cable, no longer than 6 feet.
The Parallel Port must be set to the EPP (Enhanced Parallel Port) setting in the CMOS of the computer.

AstroJet 1000 Software Version 3.3 Installation

1. Before installing the CD check that there is at least 20 megabytes of disk space available on the computer.

2. Close all programs currently running and reboot the computer. Do not open any programs prior to installing AstroJet software.

3. Install the CD in the computer. The CD should start automatically. If it does not click on the **Start** button, then select **Run**. Type "*D:\Setup.exe*" (where D is the CD drive) and then click **OK**.

4. The AstroJet Setup Menu will appear on your screen. It contains five options:

    Install Printer Software

    Read the Manuals

    Browse this CD

    Install Adobe Acrobat – This is version 4.0 of Adobe Acrobat for reading and printing the Operator Manuals.

    www.astromachine.com – this is a link to our web site if you are connected to the Internet.

5. Click on "Install Printer Software" and then choose the operating system that is installed on your computer. If you are using Windows 95 refer to the instructions under "Windows 95" and if you are using Windows 98, Windows NT4, or Windows 2000 refer to the instructions under "W98 / NT4 / W2000".

6. If this is a new printer installation (not a software update) go to the installation instructions for your operating system to complete the installation. If this is a software and firmware update, you must also download a new "*BIOS*" to the printer.

Windows 95

1. Insert the program CD into your CD-ROM drive. Click on "Install Printer Software".

2. Select "Windows 95".

3. Select "ODBC95" and follow the instructions in the windows to install "DCOM95 for Windows 95". When this is installed **Restart** your computer.

4. Open the program CD again and select "Install Printer Software", then "Windows 95".

5. Select "AstroJet" and follow the directions in the windows. At the end of the installation you will be asked to identify the model of your printer. Select the AstroJet 1000 and then **restart** your computer.

Windows 98, NT4, or 2000

1. Insert the program CD into your CD-ROM drive. Click on "Install Printer Software".

2. Select "W98 / NT4 / W2000" "AstroJet Setup will appear with the "Welcome: window. Follow the instructions.

3. At the end of the installation you will be asked to identify the model of your printer. Select the AstroJet 1000 and then **restart** your computer.

BIOS Installation

1. Load the AstroJet software for your printer into your computer.

2. Connect the computer to the printer and turn the printer **ON**.

3. Select the "AstroJet Control Panel" icon on your desktop and double click on it.

4. Select "Properties", then select "Update BIOS".

5. Click on the **Update BIOS** button. When the software completes the update check the printer's control panel for the new BIOS level.

NOTE: DO NOT TURN THE POWER OFF DURING THIS PROCESS.

Section 3 – *Software Tutorial*

This section assumes that the AstroJet 1000 software has been installed on the computer and that the computer is connected to the printer. Following the instructions below will teach you how to create a job, process that job, and in Section 4 send the job to the printer and print it. Additional information on the operation of the software can be found in the AstroJet Help file on your computer.

Using the AstroJet 1000 System Software

This tutorial begins with a brief discussion of how the program files are arranged. It is assumed that you have experience in navigating through Windows. If you are new to computers or are not familiar with Windows many books are available that can help you.

The software is divided into two parts, The *AstroJet Layout Editor* and the *AstroJet Control Panel.* When the AstroJet Printer Software was loaded on the computer, the two icons shown below were placed on the desktop.

In addition, the AstroJet folder was placed in your Program Files folder. This is the place where all of the AstroJet 1000 software resides. The AstroJet Layout Editor, AstroJet Control Panel and Help files are located in this folder along with the Data folder. The Data folder contains several additional folders one for each AstroJet Printer model. The AstroJet 1000 folder contains all of the information required by the AstroJet 1000 Printer Software to create and run the job.
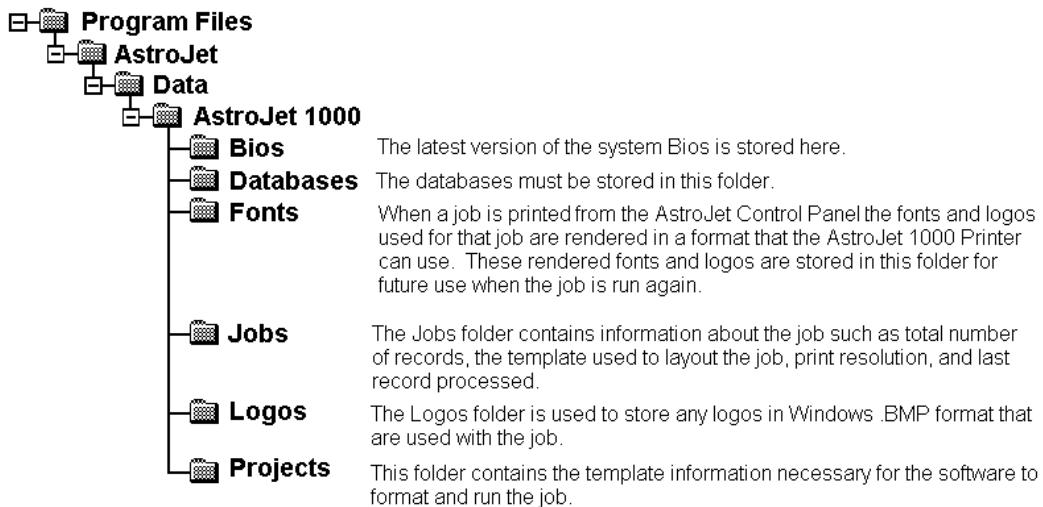
The AstroJet Layout Editor is used to create the job that is to be run. The AstroJet Control Panel is used to send the job you created to the AstroJet 1000 Printer. All jobs are designed in the AstroJet Layout Editor.

Double click on the **AstroJet Layout Editor** icon and open the program.

The "Layout Editor – Untitled"
screen will appear. Click on the
📄 icon or **File**, then **New** and the
"Layout Editor – Select Database"
window will appear. Leave the
box "Does this template require a
database?" checked and click
OK.

Layout Editor - Select Database

A template defines the basic layout and is dependent on the properties
of the database you intend to use.

Next, select a database to be associated with the new template.

_____

Some applications do not require a database to fill text fields, such as
constant labels.

☑ Does this template require a database?

OK   Cancel
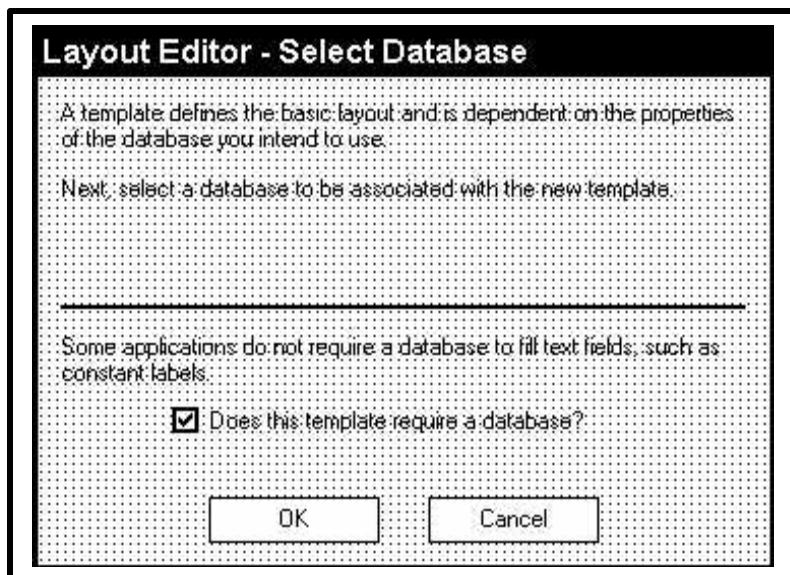
The "Select Database" screen will
now appear. Click on the drop
down menu "Files of Type" and
select "1 UP LABELS (*TXT)".
Highlight "4Lines.TXT" and click on
Open to continue.

The "4Lines.txt" database is
included in the software and is
indexed.

Select Database   ? ✕

Look in: 📁 Databases   ▾   📁 📁 📇 📇

📄 4Lines.txt
📄 Databases.txt

File name: 4Lines.txt   Open

Files of type: 1 Up Label (*.txt)   ▾   Cancel

☐ Open as read-only
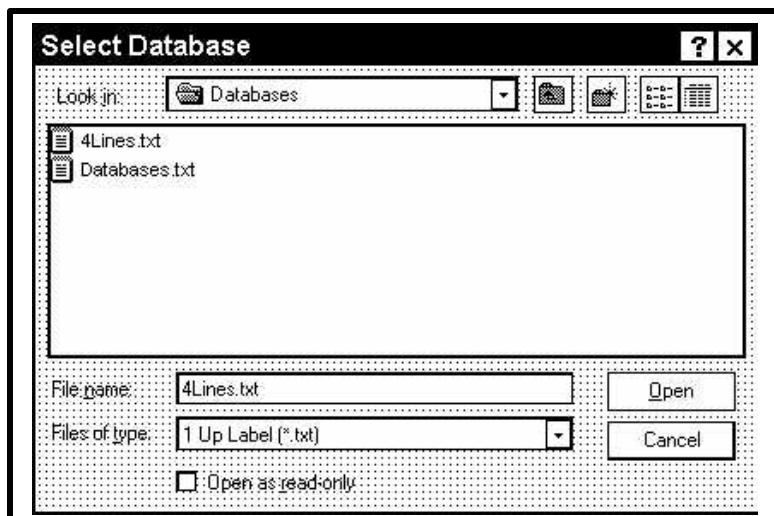
DATABASE FILES

Before we proceed there are a few
things about the way the AstroJet
software handles databases that
should be noted. If you use a TXT
database other than the one
supplied, the software will create an
index file when you click Open from
the "Select Database window. You
will be asked if the first record is
used to record field names. If it is,
check the box. Then click **OK**.

Layout Editor - Database Attributes

Certain attributes are not know about this database. Complete the form
below with the necessary information before continuing.

[4] lines (or fields) per record. Leave as zero to enable
     auto-detection.
☐ First record is used to record field names.

OK   Cancel
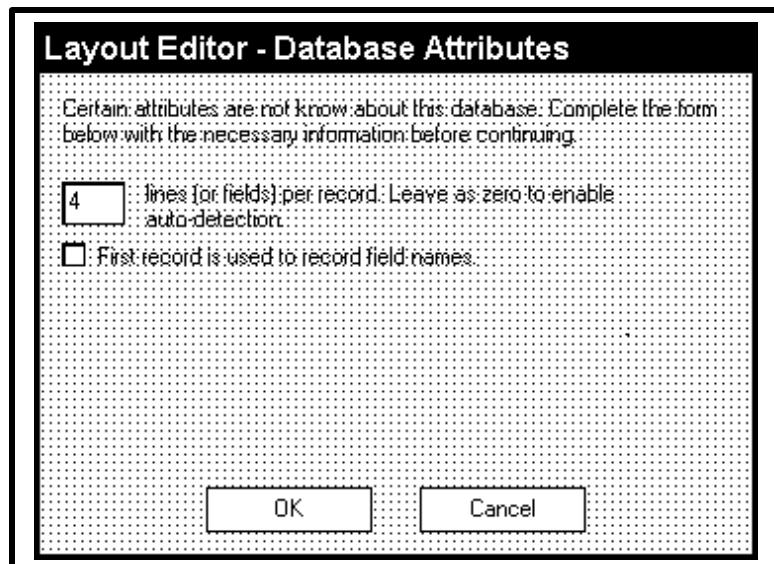
CSV databases are also indexed, but additional information about the character that delimits the fields is required for the software to create the index file. Click on the appropriate delimiter and then click **OK.**

Microsoft Access *.MDB, dBase III, IV, V, and FoxPro *.DBF files are automatically converted to *.CSV files with a comma delimiter. If you make any changes to these types of databases by upgrading or adding information the AstroJet software will automatically re-index the file the next time you open the template.

Layout Editor - CSV Database Attributes

Certain attributes are not know about this database. Complete the form below with the necessary information before continuing.

| 4 | lines (or fields) per record. Leave as zero to enable auto-detection. |

☐ First record is used to record field names.

Please specify the character which delimits fields in your database records.

| Comma | Tab | Semi-colon | Specify: | , |

| OK | Cancel |

The "4Lines.txt", database in the software is indexed. The next screen to appear is the "Database View – 4lines" window displaying the first record in the database.

Database View - 4lines

>- Astro Machine Corp
>- 630 Lively Blvd.
>- Elk Grove Village IL 60007
>
>
>
>
>
>
>

| ⏮ | ⏪ | ◀◀ | ◀ | 1 | ▶ | ▶▶ | ⏩ | ⏭ |

| OK | Cancel |
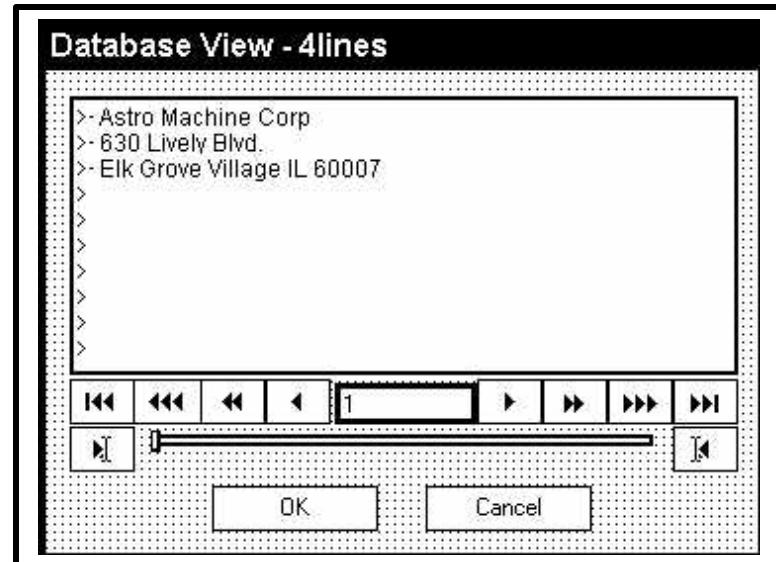
There is a series of arrows just below the record. These can be used to step through the records as shown.

Move 10X Backward
Move to First Record
Move 10 Backward
Move 1 Backward
Move 1 Forward
Move 10 Forward
Move 10X Forward
Move to Last Record

| ⏮ | ⏪ | ◀◀ | ◀ | 1 | ▶ | ▶▶ | ⏩ | ⏭ |

Record Position   Record Number
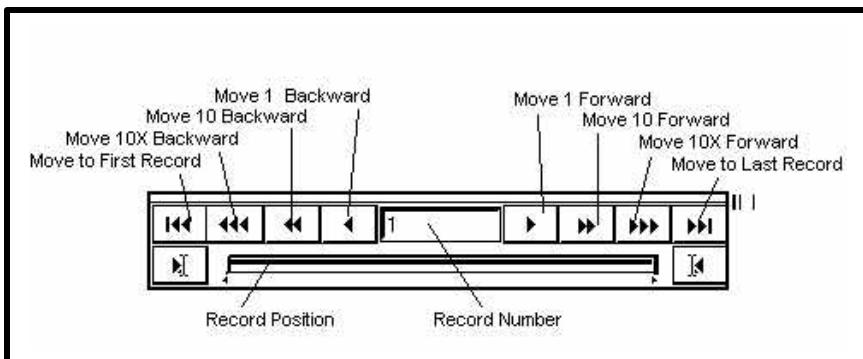
NOTE: The ☐ Databases folder in the AstroJet 1000 software is the default. You must store your databases in this folder.

Click **Next>>** and the "Layout Wizard – Stock Properties" window will appear. For the purpose of this tutorial we will select the standard #10 envelope. This window which is also accessible from the

Layout Editor screen allows you to choose from a list of standard envelope sizes or permits you to create your own custom envelope size. If you choose to create a custom envelope size, select custom, enter the size of the piece in width and length, give the piece a name in the "Save As" window and click **Save As** then **OK**. The new size will be saved to the list as a Standard size for future use.
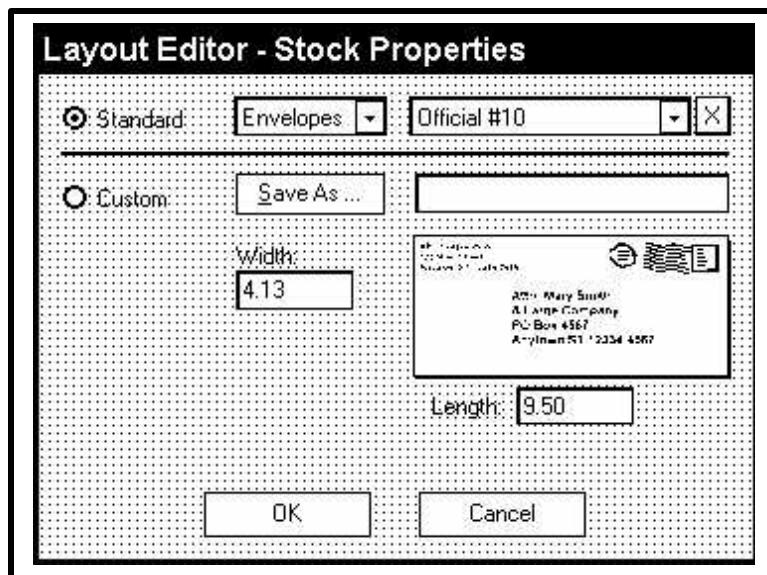
When you click on **OK**, the "Layout Editor – Untitled" window will open. You will notice that there are 8 print bands shown. The AstroJet 1000 has 4 printheads. To setup the layout screen to match the printer, click on **Setup** on the pull down menu bar and select **Printhead**. The "Print Head Properties" window will appear. Click on the check marks on Print Heads 5, 6, 7, and 8 to turn the guidelines for the heads off.

The "Layout Editor – Untitled screen will reappear as below. You are now ready to enter the information and set up the job.
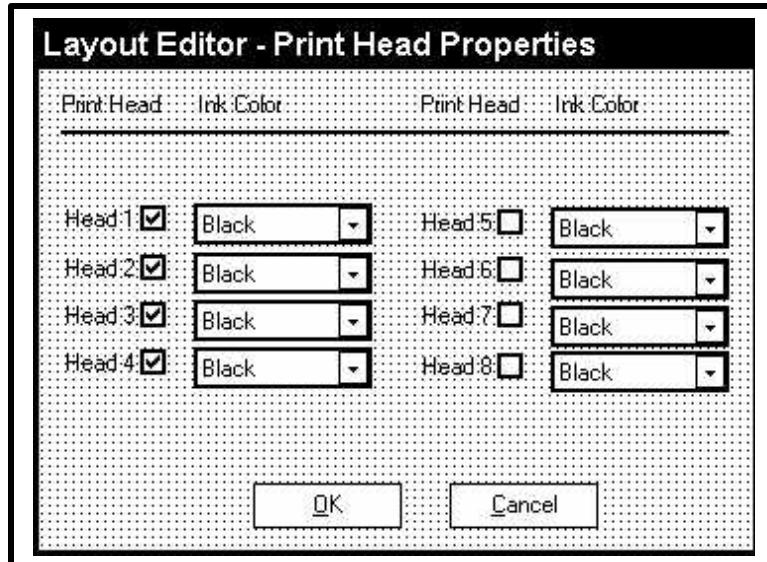
If you choose you may start by selecting **Open** from the file menu, then Select "TemplateAJ1000FWD.AJPJT", and click **OK**. Next select **Change Database** and when the "***Warning***" window appears click **OK**. The "Select Database" window will open. Select the database you wish to use and click **OK.** Immediately select **Save As…** from the File menu and give the template another name. This will preserve the original template for future use. This technique is particularly useful when Reverse Printing.

Before continuing, spend a little time exploring the "Layout Editor – Untitled" screen.

The white lines in the display represent the print cartridges and how they are positioned in the printer. The AstroJet 1000 has four print cartridges. The print cartridges are arranged on one set of rails in the following manner:

Printheads 1, 2, and 3 are connected together and printhead 4 is separate and facing printhead 3. The total printing width is 2 inches, however there is always a 1 3/4-inch space between the bank of three heads and printhead 4. This must be taken into account when setting up a job. If you wish to place a message below the destination address line on a piece you must set up the layout for Reverse printing. A template is provided to help you with this under "TemplateAJ1000REV.AJPJT". Also at the end of this sect are instructions for creating a reverse printing layout.

```
┌──────────────────────────────────────────────────────────────────────────┐
│ ▓ Layout Editor - Untitled                                    _ ▢ ✕        │
│ File  View  Fields  Setup  Tools  Help                                     │
│ ┌──┐┌──┐┌──┐┌──┐┌──┐┌────┐┌────┐┌────┐┌────┐                              │
│ │▐ ││▒ ││▦ ││⇄ ││▭ ││Layer││▁▅█││▦▦ ││▤  │                              │
│ └──┘└──┘└──┘└──┘└──┘└────┘└────┘└────┘└────┘                              │
│        ' | ' 1 ' | ' 2 ' | ' 3 ' | ' 4 ' | ' 5 ' | ' 6 ' | ' 7 ' | ' 8 ' | ' 9 ' │
│                                                                            │
│     ┌──────────────────────────────────────────────────────┐             │
│  ─ 4│                                                        │             │
│  ─   │                          ▲                             │             │
│  1   │                          │                             │             │
│  ─   │     THE MIMIMUM DISTANCE BETWEEN HEADS 3 AND 4 IS 1 3/4 INCHES     │
│  ─   │                          │                             │             │
│  2   │                          ▼                             │             │
│  ─ 3 │                                                        │             │
│  3   │                                                        │             │
│  ─ 2 │                                                        │             │
│  ─ 1 │                                                        │             │
│     └──────────────────────────────────────────────────────┘             │
│                                                                            │
│ For Help, press F1     │Database: 4Lines │Printer: AstroHP│Ratio: 2.30 │Size: 9.50" x 4.13" (1.0X)│Orientation: Forward │
└──────────────────────────────────────────────────────────────────────────┘
```
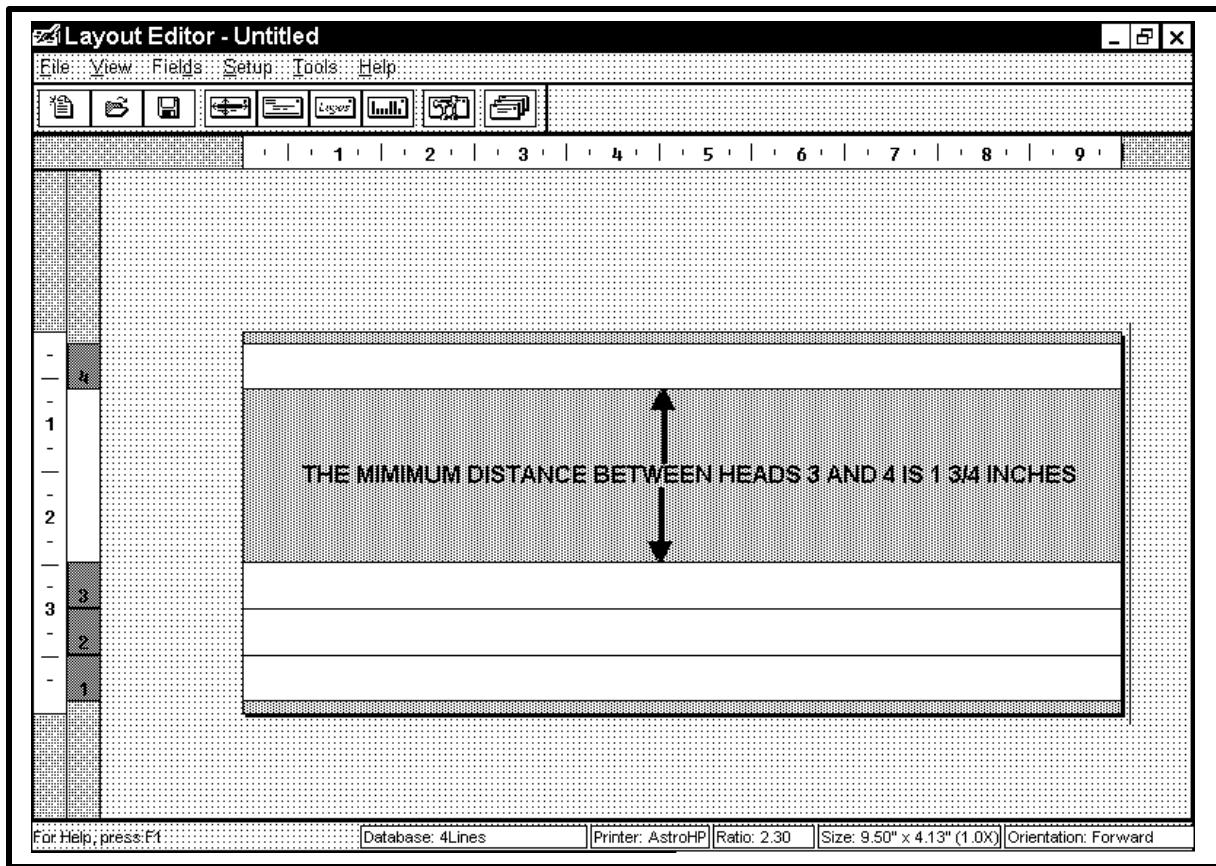
By clicking on the RED numbers to the left of the layout you can move the print band positions on the layout.

The drop down menu bar consists of the following items:

File	**View**	**Fields**	**Setup**	**Tools**	**Help**

Each of these menus provides choices that perform the tasks required for setting up the job. The second line contains icons that represent the basic tasks required to set up the job. For the purpose of this tutorial, we will use both the icon buttons and the menu bar to set up a sample job.

To the left of the media image are numbers. These correspond to the printheads and are marked with the same numbers on the AstroJet 1000 Printer. When the numbers are in RED the print direction is Forward and when the numbers are in BLUE the print direction is Reverse. To the right of the media image is a line. This guideline can be moved to any point on the layout to assist you in lining up the fields or information that you will be adding. To get all of the information to line up on a particular bank move the line close to the position desired for the text fields and right click on the mouse while the guideline is selected.

At the bottom of the window is the information line. It displays the database in use, the printer being used, the ratio of the length of the piece to its height, the size of the piece in inches, and the orientation of the print direction either forward or reverse.

Setting up the Job

It is a good idea to get into the habit of naming and saving your Layout at this point. Select **File**, then **Save Template As…** and then type the name "SAMPLE". Then click **Save**.

If you wish to change the type or size of the envelope before beginning, use the **Setup** menu and click on **Envelope Size** or click on the Envelope Size icon on the menu bar

When you click on this icon the Envelope Properties window will open. You may choose any of the standard envelope sizes listed under **Standard** or you may select **Custom** and create your own envelope size. To do this highlight the **Width** and type in the actual width of the media, and then highlight the **Length** and type in the length of the media. You may use any number or fraction from 3 inches up to 12 inches in width and from 5 inches up to 14 inches in length. To save the custom size so that it is available for future layouts type a unique name in the save as box and click **Save As…** Next click **OK** and the Layout

Layout Editor - Stock Properties

screen will adjust the view of the media to the size selected automatically. The illustration at right shows a change to a 6 X 9 inch envelope.
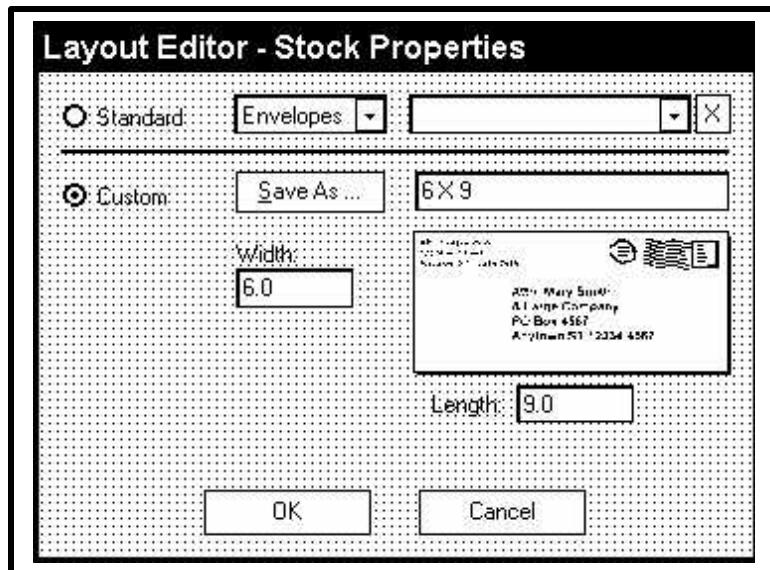
The next step is to begin building the job on the layout. When you click on the "Text Field Properties" icon the "Layout Editor – Text Field Properties" window will open. This window permits you to enable up to 24 text fields of information and/or data. One button for each of the text fields that will be different from the others in the layout should be selected. If you want to make additions or deletions to the layout you can click on this icon anytime during the setup or before you run the job to add new text fields. For the purposes of this tutorial, we are going to enable the first 3 text

Layout Editor - Text Field Properties

fields. Text Field 1 will be for the database address. Text Field 2 will be for the company name in the return address. Text Field 3 will be for an additional message.
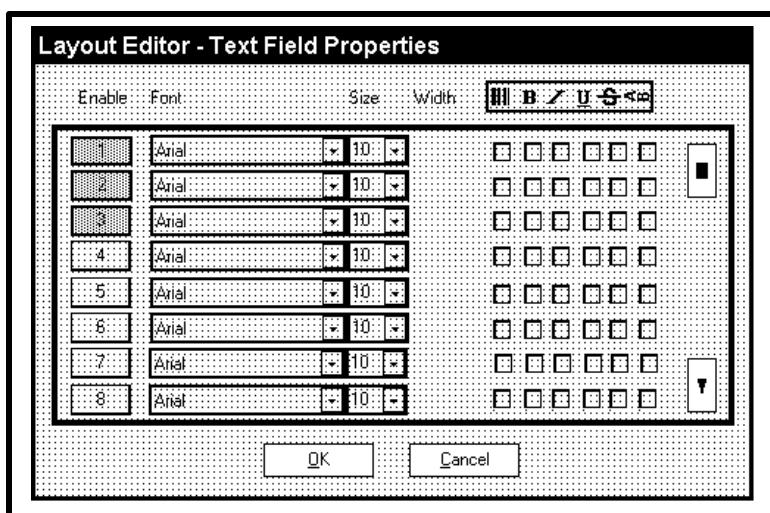
After enabling the text fields, click **OK** to continue.

The software returns to the Layout Editor screen and the data selected will be displayed at the bottom right hand corner of the layout called the blotter area. Use the mouse to move each text field into the general area of the layout where they will be finally positioned as in the example below.

14
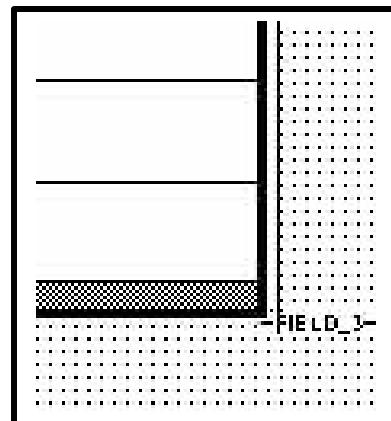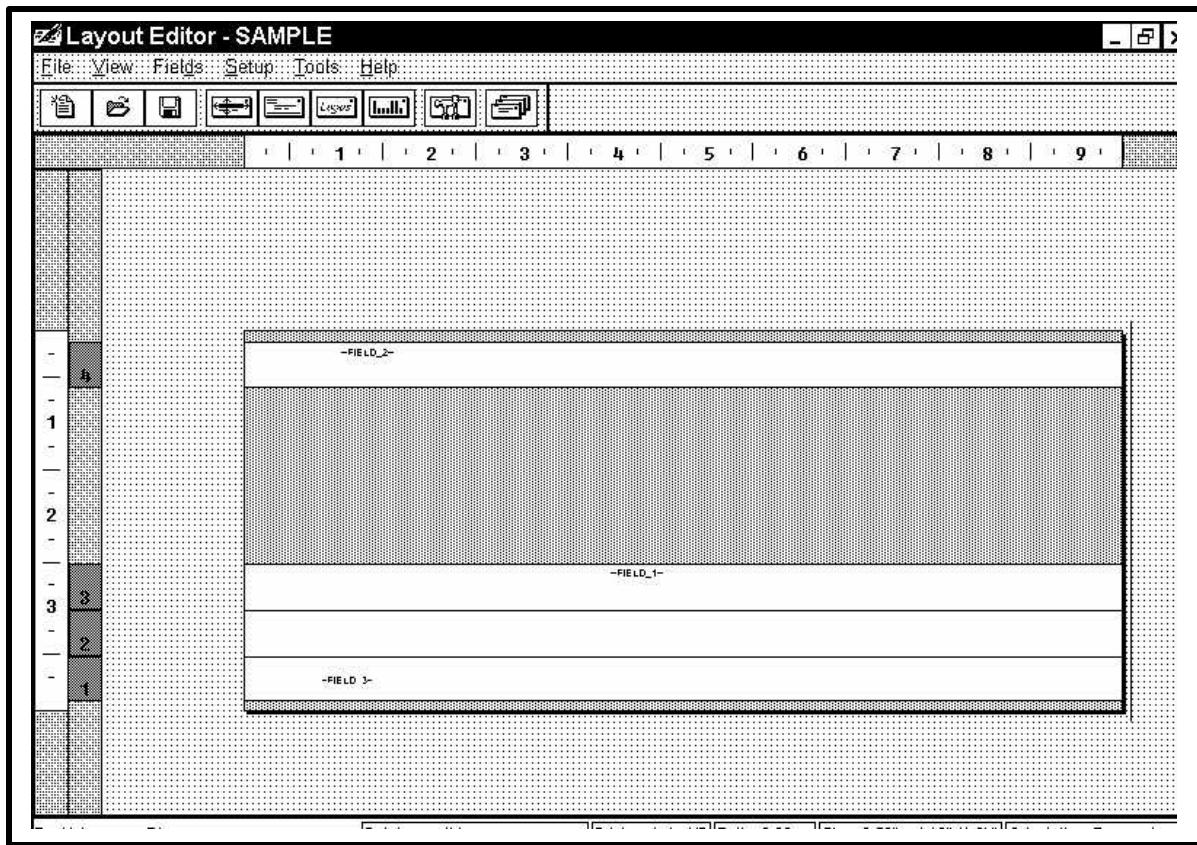
Once you have done this, place the cursor on the field that will contain the variable address from your database and double click on the left mouse button.
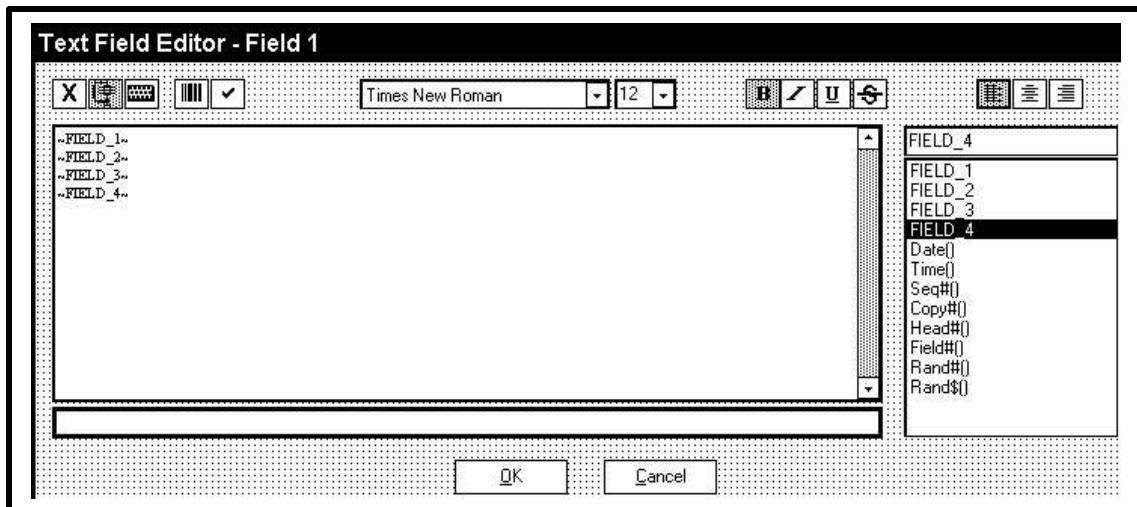
The following window will appear on the screen. This window allows you to layout the variable address fields in their proper order.

The box at the right of the window contains the names of the fields. Click on each field name to add it to the layout. You may combine fields on a single text field, or click **Enter** after each entry to create an address block. You may also add punctuation marks spaces and fixed text at any time.

Next click on the ⊞ icon to prevent blank lines in the database from appearing in the print. The ☒ icon will disable all the information in this window on the layout. The ⌨ icon is used when creating a

layout that does not use a database (see the end of this section for more information. The ▦ icon and the ✓ icon are used to select and display multiple field barcodes or barcodes in other formats than the standard USPS barcode. More information on using these two icons appears under the barcode section.

In addition to the above this window is used to change the font type, font size, and type style such as **Bold**, *Italic*, <u>Underlined</u>, or ~~Strikethrough~~. You may also change the format from Left alignment to Centered or Right alignment. When finished click **OK**.

NOTE: Any entry may be edited at any time by double clicking or right clicking and selecting edit.

To add a fixed return address to the layout double click on the text filed your placed in the return address area on your layout. The following window will appear. Type the information as shown in that window. Each data or text field that uses a different type or style of type is entered by means of an Address Text Field Editor window. When you have completed the entry below click **OK**.
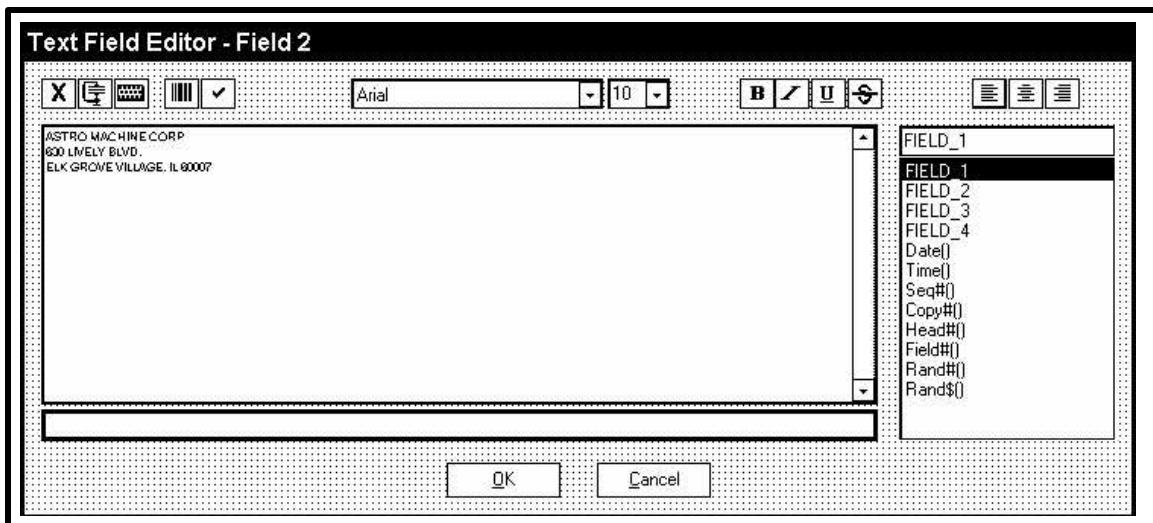
The AstroJet 1000 Software has the flexibility to allow you to add additional information to your layout in any position. For the purpose of this tutorial, we will add the following text at the bottom of the layout. Double click on the "~ Field 3~" on your layout and type the information below. Change the type style and size to match the illustration below. You can change fonts, sizes and styles in the Text Field Editor view at any time by double clicking on the message. When you have added or edited your message click OK.
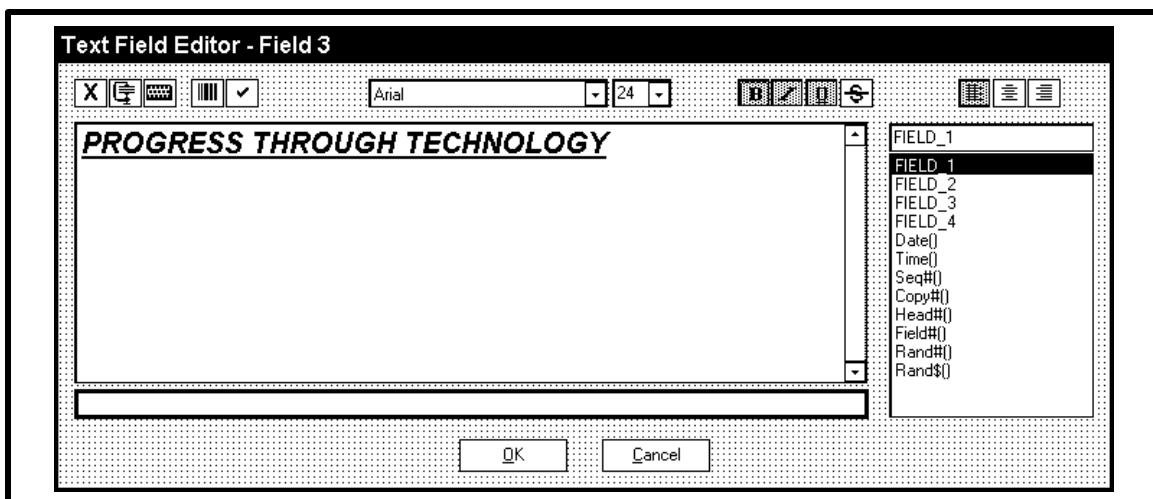
You may add as many as 24 messages to the layout in any position on the media by simply enabling a text field in the "Layout Editor – Text Field Properties" window. Then drag the text field from the blotter area to the position you would like to have it appear on the media. Double click on the new field and modify it in the Text Field Editor window.

[Logos] The Logo icon is used to add logos and graphics in **.BMP** format to your design. When you click on the icon or access it from the **Fields** drop box, under **Logos**, the window on the right appears. You may add up to eight logos to the layout. Each logo is selected by first activating one of the **Logo Enable** buttons and then browse for the desired file in the Logo folder using the **Browse** button.

The AstroJet 1000 is a 600-dpi printer. When creating graphics 1-inch is equal to 600 pixels. A logo or graphics that is 300 pixels tall will print the width of a single printhead or 1/2" high. If you wish to print a logo or graphic that would span two or more connected printheads it has to be taller than 300 pixels.

Layout Editor - Logo Properties

| Enable	File Name:	Browse
1	C:\Program Files\AstroJet\Data\AstroJet 1000\Logos\	📂
2		📂
3		📂
4		📂
5		📂
6		📂
7		📂
8		📂

OK   Cancel
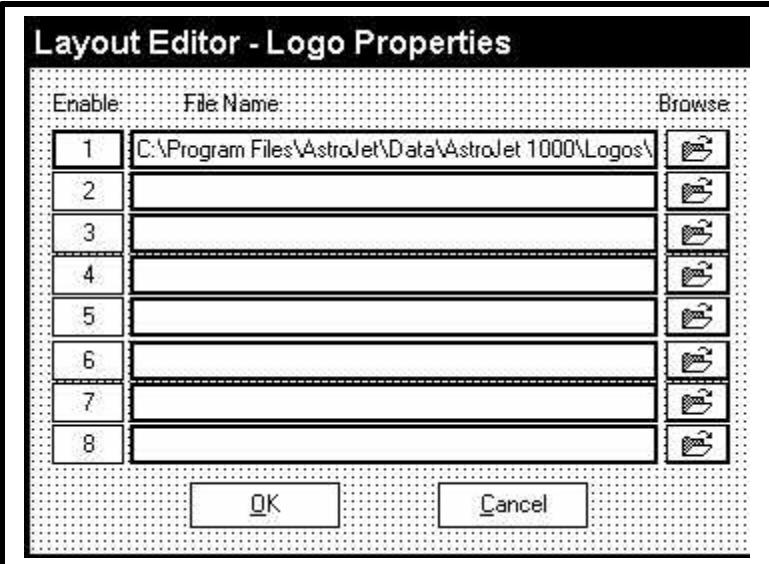
NOTE: Store all your logos in the LOGO folder in BMP format.

Once you have found the logo you wish to use, click **OK**. The screen will return to the Layout Editor and the logo will appear in the lower right hand corner of the layout in the blotter area. Use your mouse to place the logo or graphic on the layout.

[barcode icon] Press this button to add the USPS bar code to the address. Presses the number 1 **Enable** button and then select the Field where the bar code is located in the database. Then press **OK.** The bar code will appear in the lower right hand corner of your screen just below the layout in the blotter area. Click and drag the bar code to its position under the address as shown.

CAUTION: You must have all the USPS barcode digits (with or without check digit) in a dingle database field to use this icon. Otherwise use the text field method below.

IMPORTANT NOTE: In this case the bar code displayed in the Layout Editor view is a representation of the bar code on your layout. If you use the data base view function in the Layout Editor, the bar code will appear the same for each record. When the record is printed on the AstroJet 1000 Printer the bar code will be the correct one for each zip code in the database.

Layout Editor - Barcode Properties

Enable	Field
1	FIELD_4 ▼
2	FIELD_1 ▼

OK   Cancel
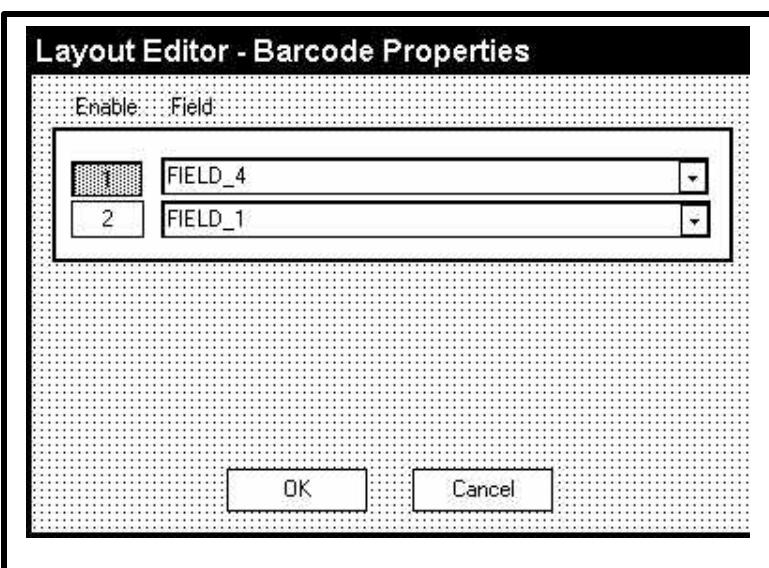
If the database contains more than one field for the barcode, or you wish to use a barcode other than the USPS barcode use the text editor to combine fields to get the proper barcode do the following:

Click on the "Text Field Properties" button and the "Layout Editor – Text Field Properties" window will open. Enable a field and click **OK**. Drag the "Data Line" from the blotter area to the location you wish the Barcode to appear on the layout. Double click on the "Data Line" and then click on the Barcode icon in the "Text Field Editor" and select the proper font and font size (the USPS barcode is a fixed size font and can not be changed). If the barcode requires a check digit and it is not included in the barcode field, click on the [✔] icon and it will be automatically calculated and inserted in the layout when the job is run.
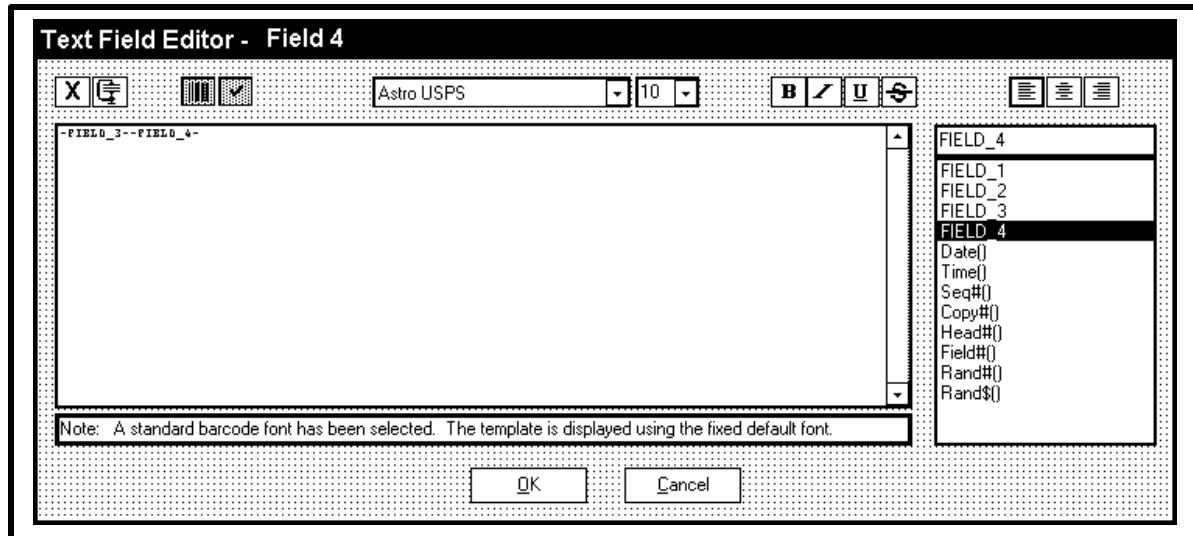
When you have completed the layout it should look like the one below:
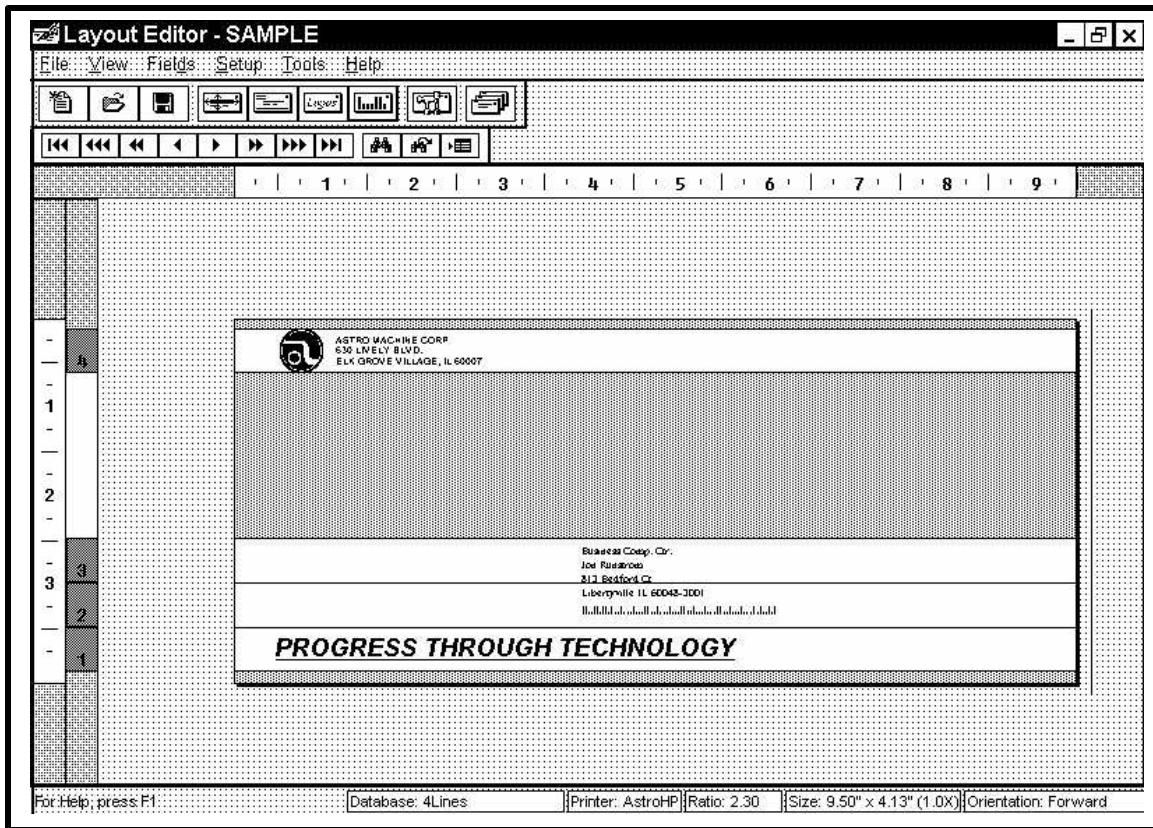
The actual database records can be viewed by clicking on the Template/Database View icon. A set of arrow buttons will appear below the icons that will permit you to step through the records.

Saving the Template

Now that you have designed the template using the layout editor, it is time to save it.

Click on **File** and select either **Save** or **Save As…** and the "Save As" window will appear. Give the template file a unique name then click **Save**. The Template will be saved in the AstroJet 1000 Data ⌷Projects folder with the proper extension ". **AJPJT**".

Saving the Job

Before exiting the "Layout Editor" you must create a job so that the database and the layout can be printed. To do this select, **File** and then select **New Job**. The "Layout Wizard – Select Template" window will appear. Click **OK** to select "Database View – (database name)". At this point, it is possible to select a specific range of records to be output. To set the range select the starting record that you wish to use by using the database advance buttons. Click on the left (▶ É) to choose the starting record. Use the same buttons to step to the last record you wish to print and click on the right button (É ◀) to set the end of the job.

Database View - 4lines

```
>· Astro Machine Corp
>· 630 Lively Blvd.
>· Elk Grove Village IL 60007
>
>
>
>
>
>
>
```

| |◀◀ | ◀◀◀ | ◀◀ | ◀ | 1 | ▶ | ▶▶ | ▶▶▶ | ▶▶| |

OK   Cancel
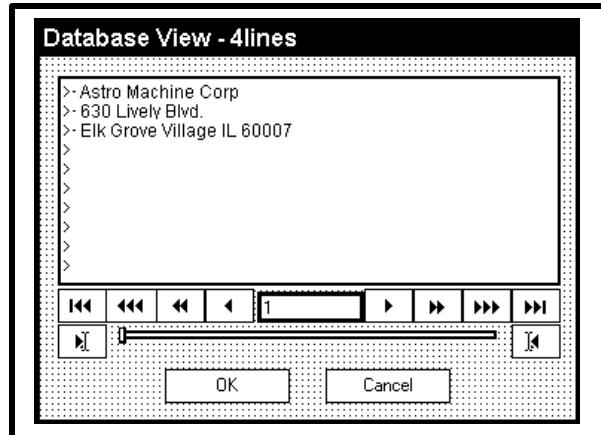
NOTE: Changes to the print range can be done at any time by opening the job in the layout editor, selecting New Job, selecting the new print range and then saving the job.

To print all of the database records for this example, skip this step and click on Next>> and save the job.

Click on **Next>>** and the "Save As" window will appear. As the default the same file name as your layout file is displayed. Click save to save it or enter a unique name for the job and click save. The AJJOB extension will be added automatically to the job file.

The template and the job that have been created are now ready to be printed. Close the Layout Editor window by clicking **File** and then **Exit**.

<u>Notes</u>

Section 4 – *Running the Job*

THE COMPUTER CONTROL PANEL

There are two ways that the Control Panel can be selected for running a job. One is from the **AstroJet 1000 Control Panel** button in the "Layout Editor". The other is from the "AstroJet 1000 Control Panel" icon on the desktop of the computer.

CAUTION: Always make sure that the AstroJet 1000 is connected to the computer and that it is turned on. If it is not the software can not establish communication with the printer.

When the AstroJet 1000 is started properly "AstroHP45" and "Ready" appear in the upper right hand box just below the data information window of the Control Panel Window.
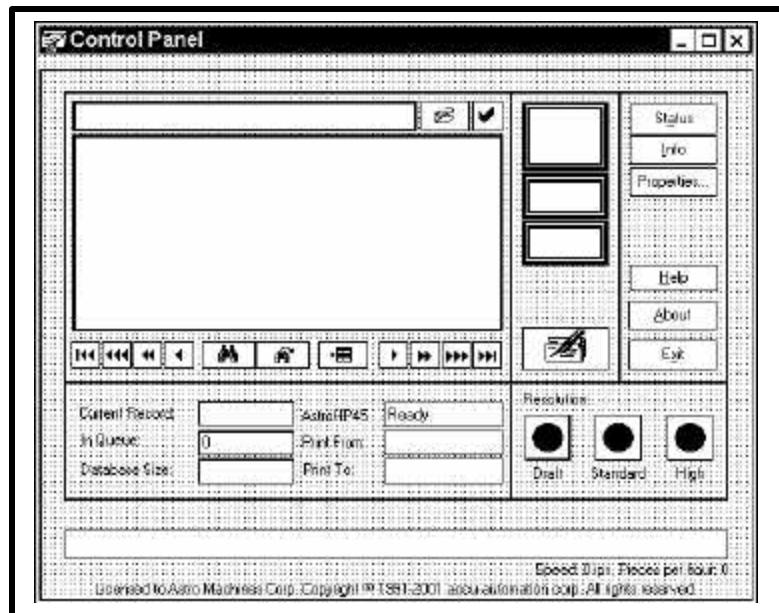
By clicking on the Load Job icon, the Load Job window will open. Choose the job you just created and then click **Load Job**.
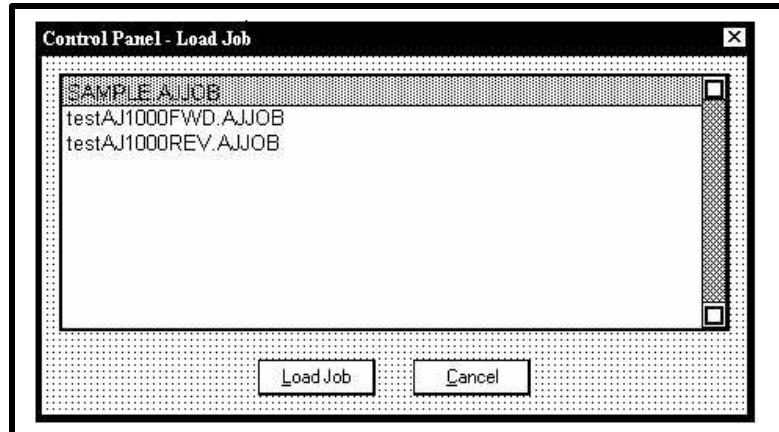
The database information will now display in the Control Panel.
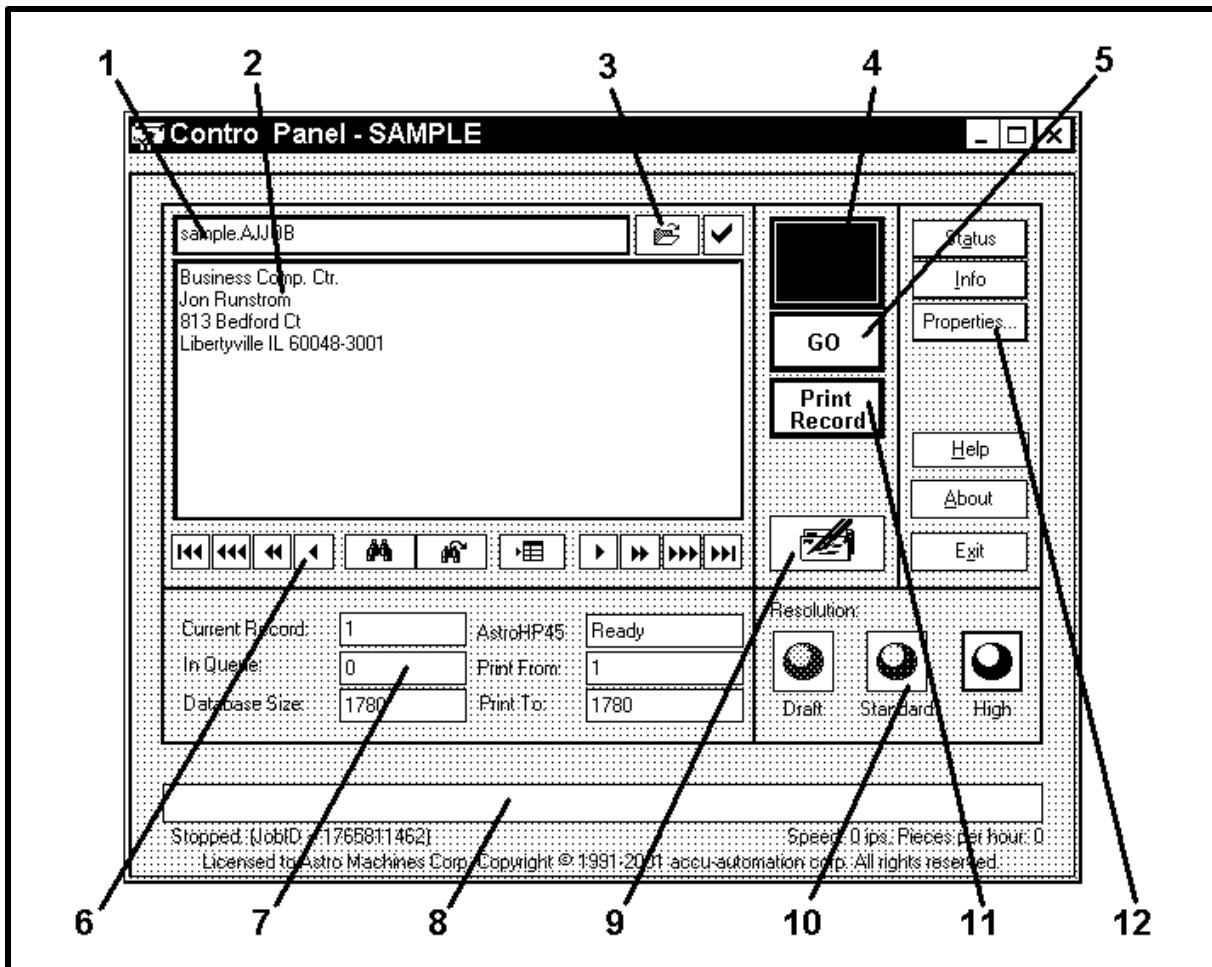
1	Name of the Job file.
2	Current Database Record. For more information on Databases see page 29.
3	Use this button to select the Job you wish to run.
4	Pressing this button while a job is running will stop the printer.
5	Pressing this button after a job is loaded will start the printing process.
6	These buttons permit you to search through the database for a record. See page 11 for more information.
7	This area tells you about the job and the record being printed. AstroHP45 must display Ready in order to print.
8	The bar shows the progress rendering and downloading the job.
9	You can access the Layout Template at any time to make changes with this button
10	These buttons select the resolution of the print and the speed of the printer.
11	The Print Record button permits you to print one or more copies of the address displayed on the screen for recovering lost addresses or checking setup of the machine before running a job.
12	The Properties button provides additional control of the printing process. See the end of this section for more information.

Running a Job

Setting up the Feeder

The following steps will assist you in setting the feeder portion of the AstroJet 1000:

1. Release the separator-locking lever located on the operator's side of the feeder and raise the separators to the up and locked position. Place one piece of media on the feeder table. Move the side guides out to their extreme open position.

2. There are four separators on the feeder. Use the two center separators for narrow media and all four separators for wide media. Place the media under the separators and lower the separators so that they rest on the media.
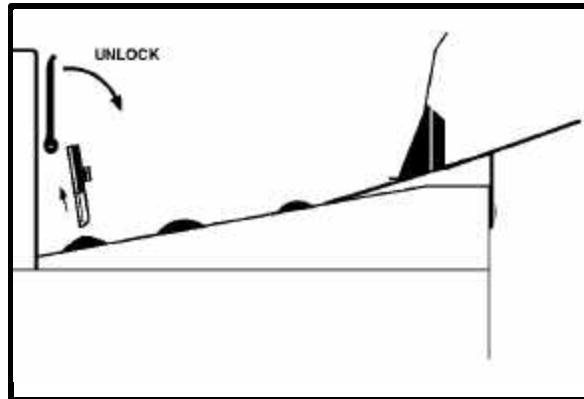
NOTE: Two types of separator tips are included with the AstroJet 1000. The set that is installed on the unit was designed for all types of media except single sheets of paper. These hard tips last the longest and carry a part number of 90-103-09. The set packed with the machine is softer and is intended to be used when running single sheets of paper or cards. They carry the part number 90-103-09S.

3. Move the separator-locking lever up to lock the separators in place.

4. Adjust the side guides to the width of the media and adjust the back guide so that the media is raised approximately 1/2-inch and rests on the curve of the back guide. When running 10 inch or longer or heavy media you may have to set the back guide so that it just touches the back of the media.
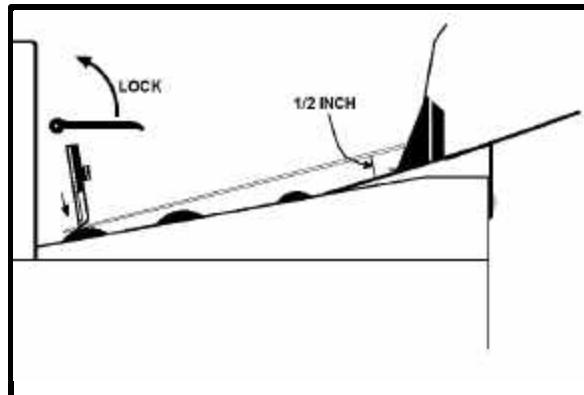
5. Turn the AstroJet 1000 on and then turn the medial thickness knob to set the initial print head height according to the chart on the right:

Media Thickness	Dial Setting
.004" to 1/32"	0 to 2
1/32" to 1/16"	2 to 3
1/16" to 1/8"	3 to 7
1/8" to 1/4"	7 to 10

Starting Up the AstroJet 1000

If the AstroJet 1000 has been sitting idle for a period of time, It is a good idea to Purge the printheads before beginning to run a job. This can be done from the AstroJet 1000 LCD Display Panel. Press **STANDBY**, then **ON LINE** to put the AstroJet 1000 in the menu mode. Then using the **NEXT** or **PREVIOUS** buttons scroll to PURGE: then press the **SELECT** button. Allow the AstroJet 1000 to run a few pieces then press **SELECT** again to stop the purge. Check that the

pattern run on the media is even, without any blank areas or white streaks. If the pattern is OK, then return the AstroJet to the standby mode by pressing the **STANDBY** button. Anytime the AstroJet 1000 sits idle for a while the purge routine should be run before running the job.

Printing a Test Print

Make sure that the AstroJet 1000 printer is properly connected to the computer and turned **ON**. Open the "Control Panel" either from the desktop or from the icon in the layout editor. Click on the Load **Job** 📂 icon and select the job you wish to run. Then click **L**oad **Job**.

Once the job is loaded the first record to be run will appear. Click on the **Print Record** button and the window on the right will appear. You have the choice of either selecting the number of prints that you wish to print (the default is 1) or selecting **Unlimited**, which will allow the printer to run the same record until you press the **Select** key to stop the feed.

Control Panel - Number of Copies

Enter the number of copies to print of the current record: `1`

☐ Unlimited (job stops when Stop button pressed)

[OK]   [Cancel]

When you have completed the running the copies for setup, simply click on **GO** to start printing the job.
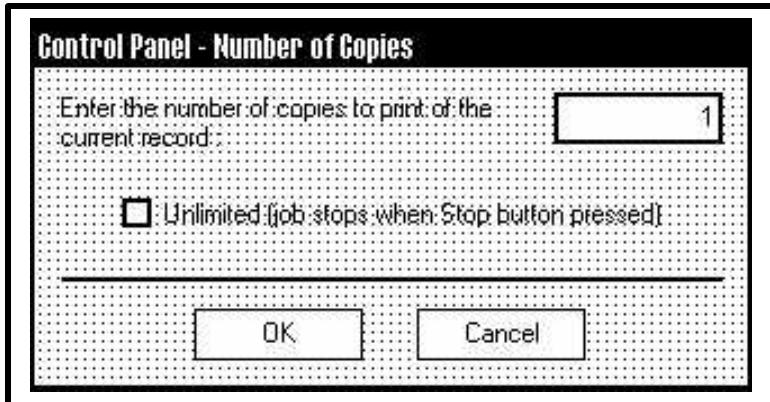
> **NOTE: This feature may be used at anytime during the printing of your job to check setup or to rerun lost records.**

Printing the Job

Click on the **GO** button to begin printing the job. The AstroJet 1000 will begin by rendering the fonts and logos then download them to the printer. Depending on the complexity of the page this process may take up to a few minutes. Once a font or logo is rendered, the AstroJet 1000 can call it up from this folder for reuse the next time a job that uses that particular font style or logo is run.

Monitoring the Job

The AstroJet 1000 can be stopped by pressing the **SELECT** key or by clicking on **STOP** in the Control Panel software without affecting the job. The printer will resume printing at exactly the same point in the database when it is restarted.

Printer Settings

The AstroJet 1000 has the following operator settings. These settings can be changed at any time during the running of a job from the printer's control panel. Once the AstroJet 1000 power is turned off the settings will revert to their defaults.

With the AstroJet 1000 turned on and the **STAND BY** indicator lamp lit, the settings can be changed in the following manner:

Setting Left Margin

To increase the gap at the lead edge of the piece:

1. With the AstroJet 1000 power switch **ON**, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Use the **PREVIOUS** or **NEXT** key to bring "LEFT MARGIN" to the top line.

3. Press the **SELECT** key. The asterisk will disappear.

4. Use the **PREVIOUS** or **NEXT** key to select the desired left margin in 0.1-inch increments.

5. Press the **SELECT** key to lock in the selection. The asterisk will reappear.

6. Press the **STAND BY** key to exit the Settings Menu and return the Printer to the print mode.

Purge the Printheads

It is necessary to Purge the printheads, especially when the AstroJet 1000 has been idle for a period of time:

1. With the AstroJet 1000 power switch **ON**, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Load media into the feeder on the AstroJet 1000.

3. Use the **PREVIOUS** or **NEXT** key to bring "PURGE" to the top line of the display.

4. Press the **SELECT** key. The asterisk will disappear and the AstroJet 1000 will start to feed media and purge the print heads.

5. Press the **SELECT** key again to stop the purge, then press the **STAND BY** key to return the AstroJet 1000 to the print ready condition.

6. Check that there is a consistent pattern printed on the media. If not, repeat Step 4 and 5 until the pattern is consistent.

Checking the Piece Counter

To check the number of pieces run proceed as follows:

1. With the AstroJet 1000 power switch **ON**, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Use the **PREVIOUS** or **NEXT** key to bring "COUNTERS" to the top line.

3. Press the **SELECT** key, the asterisk will disappear and "MACH CYCLES" with a number will appear.

4. To reset this to "0" turn the AstroJet power **OFF** and then **ON**.

5. Press the **SELECT** key again to exit, then press the **STAND BY** key to return the AstroJet 1000 to the print ready condition.

Stop on Break

The Bag and Bundle break feature is always on in the printer, but it may be turned off from the printer control panel during a job run as follows:

1. With the AstroJet 1000 power switch ON, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Use the **PREVIOUS** or **NEXT** key to bring the "STOP ON BREAK" to the top line of the display.

3. Press the **SELECT** key and then press the **PREVIOUS** key to get "NO" to appear in the display.

4. Press the **SELECT** key again so that the asterisk appears and locks in the selection.

5. Press the **SELECT** key again to exit, then press the **STAND BY** key to return the AstroJet 1000 to the print ready condition.

6. The package and/or bundle break function will then be turned off. To reactivate the function, follow the steps above or turn the AstroJet 1000 **OFF** and then **ON**. This will reset the default.

Setting Print Speed

The speed of the AstroJet 1000 may be changed to run at a slower speed than the maximum one for the print resolution. The Standard quality mode speed may be set to low speed to allow more drying time and the Draft quality mode speed may be set to low or medium speed. In High quality, the speed can not be changed, however. To change the speeds do the following:

1. With the AstroJet 1000 power switch **ON**, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Use the **PREVIOUS** or **NEXT** button to bring "PRINT SPEED" to the top line in the display.

3. Press the **SELECT** key, the asterisk will disappear.

4. Use the **PREVIOUS** or **NEXT** key to select the desired speed "LOW", "MEDIUM", or "HIGH".

   NOTE: If Standard resolution is selected there will be two speed choices available "MEDIUM" and "LOW". If Draft resolution is selected three speed choices will be available: "LOW", "MEDIUM", and "HIGH". In the "HIGH"-resolution mode only the "LOW" speed is available.

5. Press the **SELECT** key to lock in the selection. The asterisk will reappear.

6. Press the **SELECT** key again to exit, then press the **STAND BY** key to return the AstroJet 1000 to the print ready condition.

Print Enhancement

The print enhancement feature keeps all of the printhead nozzles open during printing, even the ones that are not actually printing. This prevents the printhead nozzles from drying out and causing possible loss of characters such as accent marks and the descender on letters such as "y" or "q". This feature is always on, but can be turned off by the operator as follows:

1. With the AstroJet 1000 power switch **ON**, press the **STAND BY** key to put the printer On-line, then press the **ON LINE** key to enter the Settings Menu.

2. Use the **PREVIOUS** or **NEXT** key to bring the "Print enhancement" to the top line of the display.

3. Press the **SELECT** key and then press the **PREVIOUS** key to get NO to appear in the display.

4. Press the **SELECT** key again so that the asterisk appears and locks in the selection.

5. Press the **SELECT** key again to exit, then press the **STAND BY** key to return the AstroJet 1000 to the print ready condition.

Types of Media

The AstroJet 1000 will print on many types of mailing media, but some restrictions apply. As with any other printing process, the texture of the media has a direct effect on both the print quality and the ink drying time. It is best to test each new type of media to determine performance levels before beginning the Job.

Coated and plastic types of paper do not easily absorb ink and smearing may occur. Print may appear fuzzy on very porous paper. Another cause of fuzzy printouts is excessive buildup of dust within the machine, or if the printhead is too far away from the media. Be aware, that when printing in the High Quality mode, drying time for the ink is longer than in the other modes. In addition, when humidity is high, drying time is increased.

Media Thickness

The AstroJet 1000 will handle pieces up to 1/4" thick (0.250"). All folds must be crisp and even.

CAUTION
DO NOT use stapled pieces in the AstroJet 1000. **DO NOT use paper- clipped pieces in the AstroJet 1000.** **These methods of binding the mail piece will damage the printheads, affect print quality, and may seriously damage your printer. The Astro Warranty Policy will not cover components damaged through improper use.** **The USPS does not accept this type of mail for its automated equipment.**

Databases

The AstroJet 1000 System is capable of handling many types of databases including .TXT, .CSV, Microsoft Access. MDB, and dBase III, IV, V, FoxPro (*.DBF). TXT and CSV files are handled as they are. The rest of the database files are converted automatically by the AstroJet Software to CSV files. In addition whenever you update a file the AstroJet Software will reconvert and re-index it if you place the updated files in the AstroJet Database folder in the software.

Searching for a Record

The arrows below the database information can be used to step through the data. In addition, a Search 🔍, Search next 🔍, and Jump 🔳 buttons are available to help you find a specific record in the database. Simply click on the search or jump button and fill in the requested information. The following is a list and description of each search variable:

Variable	Default	Description
Search For	Must be filled in.	This field specifies the criteria the search must find. It can be a complete or partial, word or phrase. If it **is Case Sensitive**, check the box in the **Options** and make sure that the **Search For** is precise. If the criteria are in a specific field in the database it can be specified in the **Look In** box.
Case Sensitive	0	Specifies whether upper and lower case characters should be treated as identical in searches. Non-zero value specifies searches are sensitive to the case of letters. 0 calls for case insensitive searches.
Search direction All	0	Specifies a search the entire database. Non-zero value forces searches of the entire database in the forward direction, proceeding from the first record to the last. A "0" value in the Limit causes a directional search from the current position base on Search **Forward**, and Search **Limit**.
Search Direction Forward	0	Specifies the direction of the search, either forward or backward. A number in Limit specifies forward searches, "0" specifies backward. Not used when Search **All** is set to a non-zero value.
Look In	(All Fields)	Specifies the field the search will look in to. The value string must be a valid field name for the database in use, or (All Fields). If the **Look In** value doesn't match a valid field name (All Fields) is used instead.
Limit search to:	0	Specifies the maximum number of records to search. "0" is implied to mean the number of records from the current position to the end of the database in the specified direction. Not used **Search All** is set to a non-zero value.
Template	" "	The last search template specified. This is the default pattern to be searched for.

The 🔍 icon is used to search for the next record. The arrow in the icon shows the direction that the search is moving through the database. When the next record is found that meets the criteria in the search the "Control Panel – Search" window will reappear.

The Search can also be used in the Layout View. The same criteria apply.

Advanced Features

Clicking on the **Properties…** button permits you to enter the "Control Panel – Properties" window. With this window you can control functions such a updating the printer BIOS, align the printheads, set a time delay in the feeding to increase stock drying time, and enable the bag and bundle break feature. The following discusses these features.

Update Bios

From time to time as improvements or changes in operating systems occur it may be necessary to update the Printer's BIOS. This is done by activating the "Control Panel – Properties" window. Click on the **Properties…** button. Choose Update BIOS and click on **Update BIOS** button. The program will automatically update the bios. While this process is going on *DO NOT TURN OFF THE COMPUTER OR THE PRINTER.*

NOTE: The Update BIOS function will only work if the printer is turned on and connected to the computer prior to attempting the update.
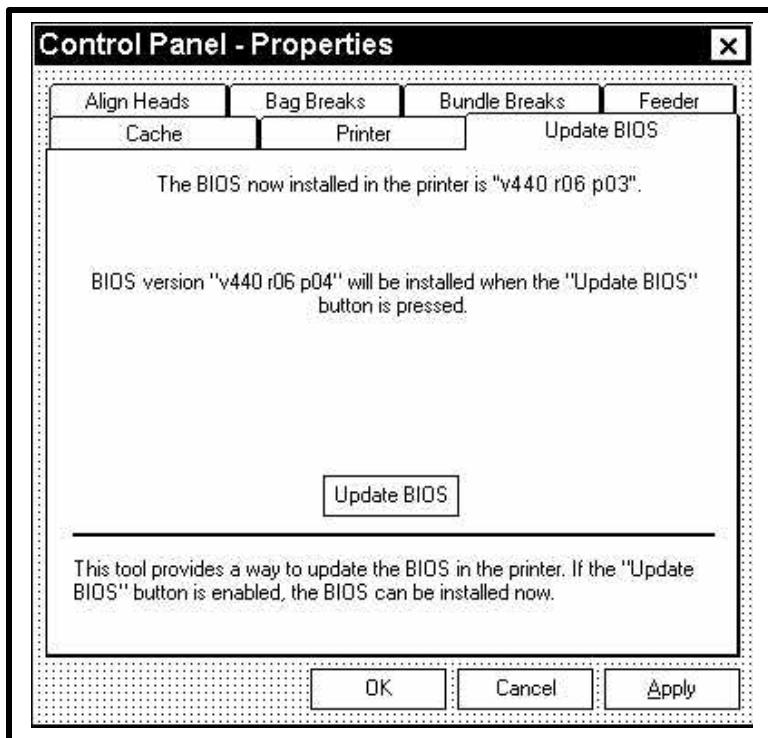
Bundle and Bag Breaks

A Bundle and a Bag Break feature are available in the AstroJet Control Panel Software. This feature will permit you to stop the AstroJet printer in order to separate the pieces according to USPS regulations. The various mail management software available for presorting have the ability to prepare your database to conform to Post Office regulations. We will not go into this part of the presorting, but we do suggest that you become familiar with the software you are using to presort your database. The USPS provides a wealth of information on their presorting regulations. Some of these are:

1. "Domestic Mail Manual" (DMM), published by the USPS and available by subscription by calling (202) 783-3238.

2. "Postal Bulletin" which provides corrections and additions to the DMM on a regular basis. You can subscribe to this by calling (202) 512-1800.

3. There are also several informative, free booklets available from your local Post Office and the USPS on the subject of preparation of presorted mail.

4. Much useful information can also be obtained from the USPS web site at www.usps.com.

The Bundle and Bag Break control windows can be found under the **Properties…** button on the Control Panel. When you click on this button the "Control Panel – Properties" window will appear. At the top of the window there are two tabs, **Bag Breaks** and **Bundle Breaks**. Their functions are similar. They permit you to separate bags of mail and bundles in the same job. You can use either or both of these to separate the pieces.

To use this feature you must first put a non-alpha or numeric character in an existing field of your database or create a separate field for the bag and bundle break character. If you do create a separate field you may use any character except the tilde (~).

All presorting software is capable of preparing your database in this way. For example we used (*****) for bag break and (**##)** for bundle break.

Once you have loaded your job in the control panel, select **Properties…** then select **Bag Break**, the above window will appear. Click on the **Enable Bag Breaks** to select it.

Select the field where the break character was placed in the database. If you used a character other than the (*) place that in the **Break Sequence** block, then select pieces for the break in the **Break Delay** block. Then click **OK**. The printer will stop at the break when the job is run.

If you require a Bundle Break repeat the above sequence, but use a different character or field to designate this function.

NOTE: You can use any alpha or numeric characters but not the tilde (~) for this if you place the character into a separate field in the database.

Start the printing process by clicking the **GO** button. When the AstroJet Control Panel software reaches a break character the printer will stop feeding. To restart the printing process, press **SELECT** on the control panel.
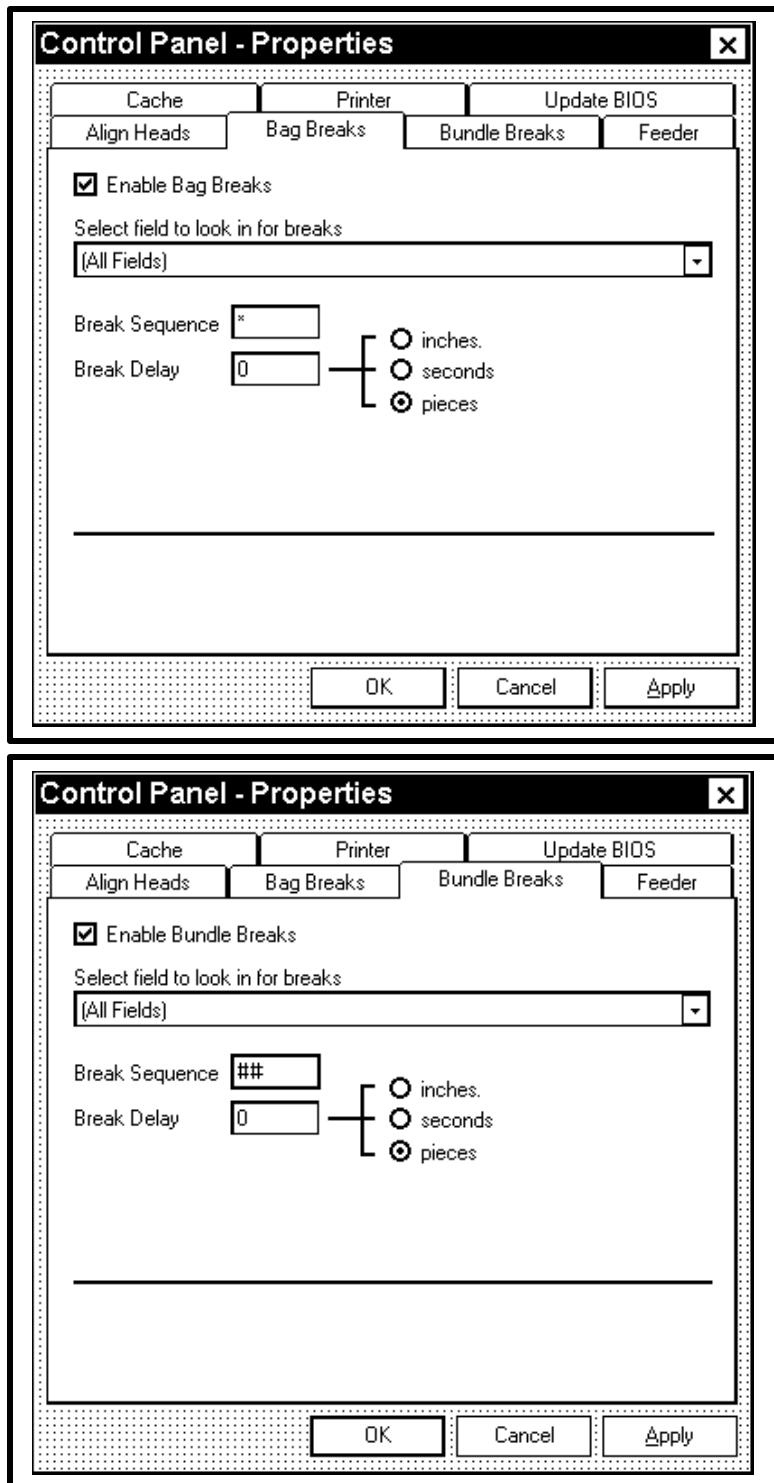
There is an optional feature on the Control Panel of the Printer that permits you to disable the break function. See the section on "Printer Settings" for more information.

Feeder Settings

In order to permit enough time or space between pieces to assist in drying the ink or to help the operator to handle the piece more efficiently. The **Feeder Settings…** button is provided. When you click on it the following screen appears. Click on **"Should Feeder Delays be enabled?"** to activate the feature. Then select either **seconds** or **inches** and place a number in the box provided. The default is 5.5 inches. Click **OK** to complete the process.

When activated there will be a delay between the feeding of each piece regardless of the resolution of the print selected.

Control Panel - Properties

| Cache | Printer | Update BIOS |
| Align Heads | Bag Breaks | Bundle Breaks | Feeder |

☐ Should Feeder Delays be enabled?

Set the feeder delay to: [5.5] ○ seconds ⊙ inches.

[OK] [Cancel] [Apply]
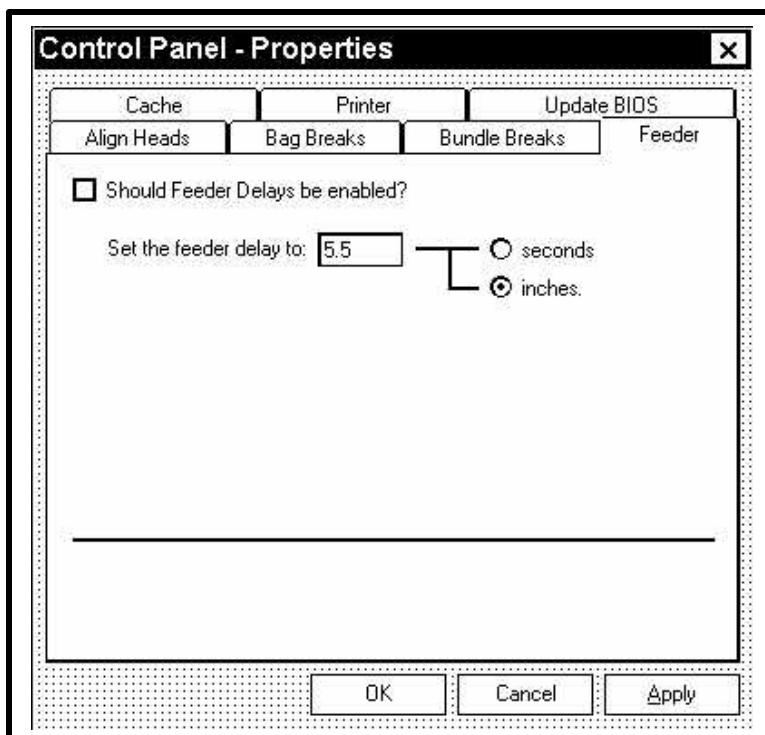
Align Heads

When printing addresses and particularly logos that stretch across several heads, it may be necessary to adjust the alignment of the printheads to fine-tune the image. The Align Print Heads function has the ability to achieve this alignment, producing a straight line across multiple heads. The software can change the printing offset in fine increments from its factory settings.

> **NOTE: Make sure the object or address being printed is aligned in the layout using the Alignment Tool on the Setup Screen in the AstroJet Layout Editor before you use this procedure. This procedure is only for very fine adjustments and will not correct gross misalignment on the Setup Screen.**

1. Turn the printer **ON** and open the Control Panel. Select **Properties…** Then select the Align Heads tab.

Control Panel - Properties

| Cache | Printer | Update BIOS |
| Align Heads | Bag Breaks | Bundle Breaks | Feeder |

Head/Band Alignment   Head/Band Alignment

1/3 ◄ ──🔲── ►   5/7 ◄ ──🔲── ►
2/3 ◄ ──🔲── ►   6/8 ◄ ──🔲── ►
3/3 ◄ ──🔲── ►   7/8 ◄ ──🔲── ►
4/4 ◄ ──🔲── ►   8/8 ◄ ──🔲── ►

[Restore]   [Unlock]

This page allows fine tuning of the head offsets: plus or minus .040".

[OK] [Cancel] [Apply]
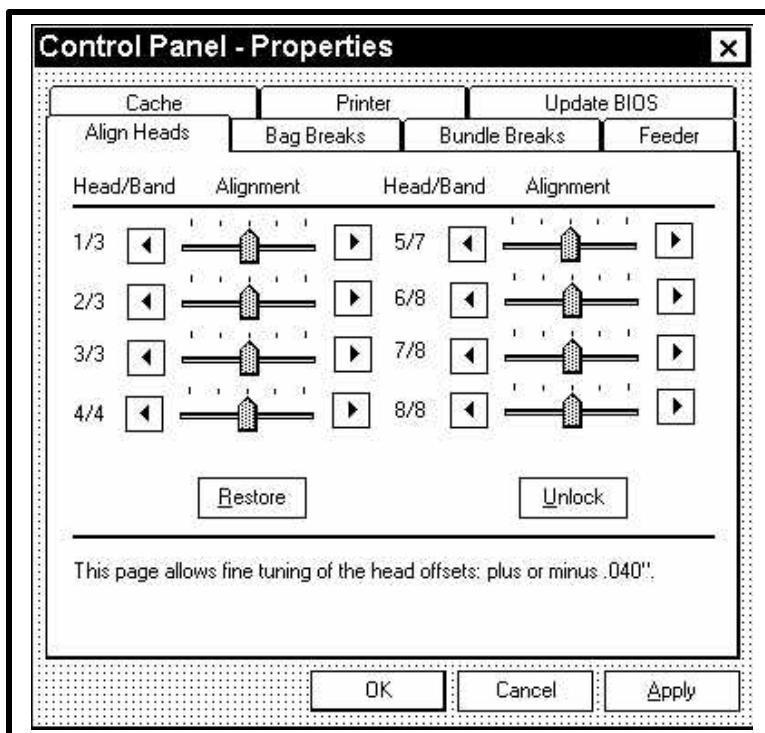
2. The printheads are initially locked with the others in the same Band. They should be unlocked using the **Unlock** button.

3. Each index mark on the Alignment Controls represents 4 thousandths of and inch. You can adjust the print heads to half that value, to within 2 thousandth for a total of 20 thousandths of an inch to either side of the factory setting.

4. Simply drag the alignment pointer on a print head to a new setting to change the exact location at which it starts to print. You can also us the fine adjustment arrows to work in 2 thousandths increments.

5. When you have completed the adjustment click on **Apply** to register the change.

6. To check the change click **OK** to return to the "Control Panel" screen. Click on **Print Record** to print one or more copies to check the alignment.

7. You can make additional adjustments anytime by clicking on **Properties…** and repeating the adjustment process.

The changes that you make to the head alignment are permanent in the software. To restore the factory settings click on **Properties…** then **Align Heads**. Next click on **Restore Defaults** and then deselect **Unlock** to lock the printhead bands. Click **Apply** then **OK** to close the "Control Panel – Properties" window.

Cache

The Cache tab is used to control the rendering and caching of the logos and fonts. When you run a job the control panel software renders the fonts and logos into a format that the printer can use to print the job. The rendered fonts and logos are stored in the Font Folder in the AstroJet software. To clean up this file do the following:

1. Turn the Printer **ON** and open the Control Panel.

2. Click on Properties and select the Cache tab.

3. Click on **Flush Fonts** and/or **Flush Images**.

NOTE: You will notice that there are two checked boxes in each of the Cache Settings. One is " Enable pre-rendered fonts or images and the other is Cache pre-rendered fonts or images. They should remain checked. When unchecked the control panel will process the job, but not save the rendered fonts or images. The next time you run the job they will have to be rendered over again. Leaving the boxes checked eliminates this.
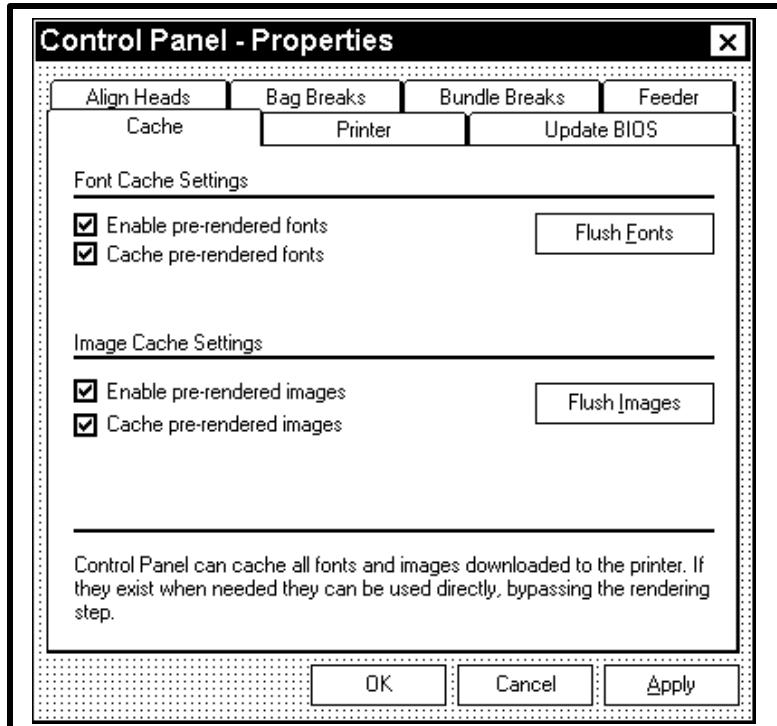
Printer

The purpose of the Printer tab is to disable the output to the AstroJet Printer. When the "Disable output to printer for this session is checked the software will load the file and render the fonts and logos, but it will not permit you to print. The default for this function is unchecked or **OFF**.

If you open the control panel while the printer is turned off the Control Panel software will ask you if you want to disable the printer for this session. This is the same as checking the box.

Section 5 – *Maintenance*

This section discussed how to care for the inkjet cartridges, clear paper jams, replace sheet separators, and perform routine operator maintenance to the AstroJet 1000 Printer.

The Inkjet Cartridge

The AstroJet 1000 inkjet cartridges must be replaced when out of ink, when print quality is poor, or when purging and cleaning have not helped the image quality.

The Approximate life of the HP 51645A Inkjet cartridges based on three lines of 20 characters at 10-point size per address is:

High Quality	50,000 addresses
Standard Quality	100,000 addresses
Draft Quality	200,000 addresses

NOTE: These figures can vary depending on the font selected.

To Replace the Inkjet Cartridge:

- Remove the used cartridge from the cartridge holder by raising the latch lever to release the cartridge, then pull the cartridge up and out of the holder.

- Remove the new inkjet cartridge from its packaging, taking care not to touch the copper contacts, the metal plate, or the gold printhead. Remove the protective tape from the printhead.

- The cartridges are held in place by a lever mounted on the inkjet cartridge holder. Release the lever by raising it vertical.

- With the cartridge's printhead pointing down, slide the cartridge into the holder and push down and toward the contacts in the holder.

- Make sure the cartridge is seated in the holder then close the lever to secure the cartridge in the holder. Do not force the lever into place.

- Repeat the above for the remaining cartridges.

CAUTION
Never shake, drop, or hit the cartridge against the palm of your hand or any other hard surface. Shaking the print cartridge does not "mix" the ink and hitting the cartridge against a hard surface does not clear the nozzles Both of these actions actually hurt the print quality because they allow bubbles to form near the ink firing chambers. These bubbles prevent the nozzles from firing causing white streaks in the print image.

Storage

Short-term storage is defined as less than 2 days or less than 1 day in a hot and dry environment. Long-term storage is defined as more than 2 days or more than 1 day in a hot and dry environment.

Short-term Storage

Leave the cartridge in the AstroJet 1000 for short periods of time, 1 day or less.

The next time that the AstroJet 1000 is used, the printhead may have to be cleaned and purged

Long-term Storage

Keep the printhead in an area that is relatively free of dust and paper particles that is not too dry

Place the cartridges in a Tupperware container with a damp sponge or towel to maintain humidity and prevent the printhead from drying out.

When the cartridges are ready to be used again, the printhead will need to be cleaned.

Disposal

The cartridge may be disposed of in a normal manner.

If there should be an ink spill, use soap and water

⚠ **The ink in the cartridge may be harmful if swallowed. Keep new and used cartridges out of reach of children. Discard empty cartridges immediately.**

to clean up any problem areas. Abrasive soap works well to get the ink off of hands.

Cleaning the Printhead

To maintain good print quality it is important that the printheads are kept clean. During the printing process ink spray, paper fibers, and dust can cause a build-up on the printheads. This build-up will eventually degrade the print quality. If you begin to notice problems with the quality of the print, or to just prevent a build-up from occurring with the printhead with a wet fiberless cloth.

Cloth should be:	*Cloth should not be:*
✔ Soft	✘ Abrasive
✔ Fiberless	✘ Made of small fibers
✔ Moist with Water (Distilled is best but tap works)	✘ Dry or containing chemical additives

Wipe slowly across the long-axis with the printhead facing down (as shown). Do not apply excessive force, as this could scratch the nozzle area.
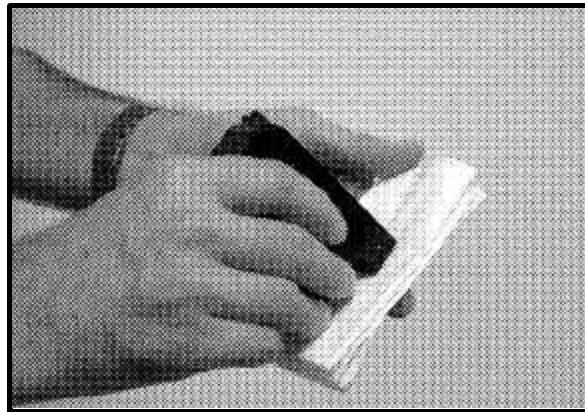
Purging the Nozzles

If the printhead sits inactive for a period of time, ink may dry in the nozzles. Printing may not remove these "ink plugs" from the nozzles. White streaks will then show up in the printed text or graphic. In

order to obtain better print quality, these ink plugs need to be forced out or purged. A Purge routine is built into the AstroJet 1000 Printer. It can be accessed from the LCD panel on the AstroJet 1000 Printer. Refer to **Section 4 – *Operating the AstroJet 1000***, under "Running a Job; *Purge the Printheads*". If this does not solve the problem then proceed as follows:

1. Wipe the printhead with a wet cloth as described in "*Cleaning the Printhead*" above.

2. Perform the Purge routine from the AstroJet 1000 Printer LCD Display panel.

3. Wipe the printhead again with a moist cloth.

   NOTE: For more information refer to the Troubleshooting Print Heads in Section 6 – Trouble Shooting Guide.

Jams in the AstroJet 1000 Printer

If a jam occurs, **STOP the AstroJet Printer**. The missed addresses can be recovered at the computer from the control panel by stepping back to the place in the job where the jam occurred. No data will be lost.

Some possible reasons for jamming are:

1. Feeding more than one piece of media.

2. Damaged media, such a dog-eared (turn down corners).

3. Media that is not stiff enough may not be usable. Media that meets Postal stiffness requirements for automated feeding is acceptable in the AstroJet 1000.

4. Envelopes that are caught under the flap of another envelope or stuck to one another may cause jamming.

Removing Jammed Media

1. It may be necessary to move one or more of the printheads to gain access to the jammed media. Take care in removing jammed media to prevent damage to the print heads. All pieces of the jammed media must be removed from the feed path.

2. Use the control panel in the AstroJet 1000 Software to recover any lost addresses.

3. Restart the job by putting the AstroJet 1000 back to **STAND BY** and then resume printing by using the **GO** button on the AstroJet 1000 Software Control Panel.

Replacing the Sheet Separators

The sheet separators insure separation of the pieces as they are being fed. The do wear and must be replaced from time to time. If you experience double sheet feeding and can not adjust the separators to prevent it, they should be replaced. Replacement of the sheet separators is not difficult. Just follow the steps below:

1. Turn off the AstroJet 1000 and unplug it from the power source.

2. Release the separator-locking lever and move the paper side guides to their maximum open position.

3. Lower the separators so that they touch the feed roller.

4. Remove the screw [A] and the separator support [B.] Then remove the separator [C] by prying it out of the holder.

5. Install a new separator in place and replace the separator support and screw.
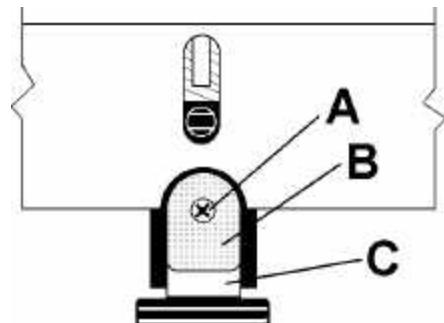
Cleaning

The AstroJet 1000

WARNING
THE ASTROJET 1000 PRINTER IS A PRECISION MACHINE THAT SHOULD BE CLEANED REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE DISCONNECT THE MACHINE FROM ITS POWER SOURCE!

The AstroJet 1000 must be cleaned regularly of accumulated paper dust and ink. Depending on the types of media that are run, paper dust may accumulate within the printer and on the transport. To properly clean the AstroJet 1000, unplug it from the power receptacle and remove the covers.

The internal areas are best cleaned with a vacuum that has a soft brush attachment to help loosen the dust particles. Take care not to damage the PC Boards or electrical wiring.

The exterior of the machine may be cleaned with any standard household cleaner which is non-abrasive and does not contain plastic harming solvents.

CAUTION
NEVER SPRAY OR POUR CLEANERS DIRECTLY ON OR INTO THE ASTROJET 1000 PRINTER. EXCESS LIQUID COULD HARM ELECTRONIC PARTS. ALWAYS DAMPEN A RAG WITH THE CLEANER AND APPLY IT TO THE PARTS TO BE CLEANED.

Cleaning the Media Sensor

Periodically check the media sensor located in the print carriage area of the printer section. The sensor should be clean and free of accumulated paper dust. Use a vacuum with a soft brush attachment or dry compressed air to remove the dust.


MEDIA SENSOR

PRINTER TRANSPORT BELTS
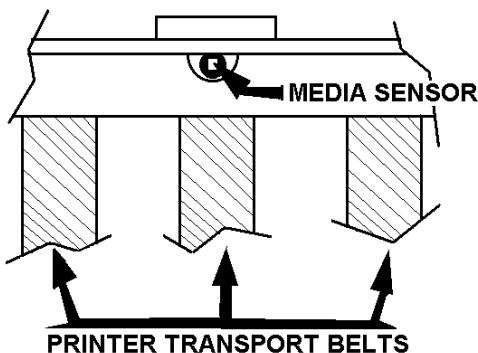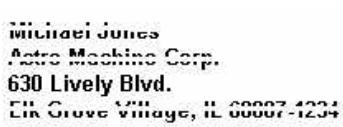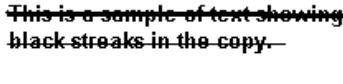
Section 6 – *Trouble Shooting Guide*

The following trouble shooting guides are provided to assist you in solving any problems that might occur with the AstroJet 1000 Printer or its software. We have tried to make them as complete as possible. The best advice we can offer is to make sure that the system is setup properly, plugged in, that it has an adequate supply of ink before attempting to trouble shoot any problem.

Inkjet Cartridges

HP 51645A Print Cartridges

CONDITION	PROBLEM	SOLUTION
Cartridge will not print	Sheet is blank even after it has gone underneath cartridge(s).	• Check to make sure the tape is off the printhead • Remove and reinsert the cartridge into the carriage holder • Install a new print cartridge • Clean cartridge • Check media thickness adjustment.
White streaks in text or graphics	Michael Jones Astro Machine Corp. 630 Lively Blvd. Elk Grove Village, IL 60007-1234	• Re-insert the cartridge into the carriage • Wet wipe and purge the cartridge (There are clogged nozzles.) • Clean interconnects • Insert a new Print Cartridge
Black streaks around text	This is a sample of text showing black streaks in the copy.	• Wet Wipe the cartridge (There is ink buildup or dirt on the cartridge.) • Check Media thickness adjustment. It may be too close

AstroJet 1000 Printer

PROBLEM	REASON	REMEDY
Printer does not turn on	No power to printer	Check that power cord is plugged in Check that power outlet is live Check fuse on power switch
No communication	Improper cabling Unit not receiving power	Use Proper cable (see Sect. 2) Check plug connections, on/off switch and fuse on back panel (see Sect. 1)
Improper output (address information out of order, misfeeding, etc.)	Wrong interface settings Static electricity Dirty media sensor	Check software or data base on PC Turn AstroJet 1000 of and on Clean media sensor
Extra lines; losing data	Data base problem	Check data in data base program
Not printing on media	Media not positioned properly	1. Adjust print band vertically 2. Adjust media margin setting on AstroJet 1000
Print too light or missing character dots	Clogged or dirty printheads Running out of ink	Either purge or clean cartridges Replace inkjet cartridges
Media jams	Double feeding Media is curled or bent Media is too thin Media is too thick Media less than 1/4" Fails to feed	Adjust feeder Uncurl media Media must be at least 0.008" Media must be less than 1/4" thick Jog contents of piece to feed end Side guides too tight

WARNING

DO NOT REMOVE THE SIDE COVERS OF THE ASTROJET 1000 PRINTER

THERE ARE HIGH VOLTAGES PRESENT BEHIND THE COVERS!

AstroJet 1000 Software

ERROR MESSAGE	PROBLEM	SOLUTION
Template File is Corrupt	The AstroJet 1000 Control Panel can not open the related **ajpjt** file.	Re-open AstroJet 1000 Layout Editor and attempt to open the file. Re-save the file and attempt to open the AstroJet 1000 Control Panel again. If the file still will not open in the AstroJet 1000 Layout editor, restart the computer and try again. Try a backup or older copy of the **.ajpjt** file
Job Loading Failure	A problem arises loading the job file.	Click on **Remove Job**, if you know the file is out of date and no longer in use. Click on **Recreate Job** to re-open the Layout Editor, then click on the **File Menu** and select **New Job**, select the print range and Click on **Next>>** to continue. Click **Next>>** again and then save the job with a new name. Click on **Cance**l to return to the Control Panel and select another job file.
Template View Warning	Due to the design of the database management software, it is not possible to display records simultaneously in the Layout Editor and Control Panel.	When you click OK the Layout Editor will switch automatically to the Template View. **Caution: If an attempt is made to switch to Database View in the Layout Editor, a fatal error will occur and any unsaved information will be lost.**
New Fields missing from layout screen	Fields not visible in blotter area on Layout Screen.	The line may be piled up on top of each other. Click and drag the first line into the appropriate Printhead Area. Open the Address Field property sheet by right clicking on one of the existing address lines or by selecting Address from the Fields Menu. Select OK. The fields should re-appear in the blotter area.

Software continued…

ERROR MESSAGE	PROBLEM	SOLUTION
New Fields missing from layout screen. Continued…	Fields not visible in blotter area on Layout Screen.	Right click on one of the fields that has already been positioned and click OK on the field property sheet an they should re-appear Right click on one of the fields that has already been positioned and click OK on the field property sheet an they should re-appear
Printing in Wrong Location on the mailing piece	Printing too far to the Left or Right.	Make sure that the size of the mailing piece entered in the Setup Menu is correct.
		Make sure that the piece on the Layout Screen looks EXACTLY the way you want your piece to look. Use the rulers to verify that the fields are located the proper number of inches form the edges.
		Adjust the left margin setting.
		Check the product detection sensor to verify that it is properly aligned.
	Printing Too High or Low	Check image on layout screen.
		Adjust the paper guide, or individual printheads on their mounting brackets to adjust how far from the bottom edge of a piece the fields are printed.

Appendices

APPENDIX A – ASTROJET 1000 Specifications

The information (electrical and physical dimensions, etc.) on the AstroJet 1000 is presented here for your reference. Specifications are subject to change without notice.

PRINT QUALITY (Dots Per Inch)	High Quality Standard Quality Draft Quality	600 x 600 dpi 600 x 300 dpi 600 x 150 dpi
PRINT SPEED (Inches Per Second)	High Quality Standard Quality Draft Quality	15 ips 25 ips 50 ips
IMAGE AREA	Total of 2 inches using four printheads	
MEDIA SIZES	Maximum Minimum	14" long x 13.5" wide up to 1/4" thick 5" long x 3" wide up to 1/4" thick
PRINT MECHANISM	HP 51645A Inkjet Cartridge	
NUMBER OF CARTRIDGES	4 cartridges	
INKJET CARTRIDGE LIFE (approximate)	Addressing: High Quality 1,050,000 characters Standard Quality 2,100,000 characters Draft Quality 4,200,000 characters (three line address labels only, logos and other printing not included in the above)	
GRAPHICS AND LOGOS	Allows printing of Bitmapped graphics, logos, and pictures	
SOFTWARE AND FONTS	Windows 95, 98, NT, and 2000 All Windows True-Type fonts	
PRINT COLORS	Standard Black, Fast Drying Black, and Spot Colors	
INK	Water based may require drying assistance for coated stock	
OPERATOR DISPLAY OPTIONS (LCD)	Counter, Stop on Break, Print enhancement, Print Resolution, Purge, Left Margin, BIOS Version	
PC INTERFACE	Centronics Parallel Cable	
DIMENSIONS	11.5" H x 19.56" L x 20" W	
ELECTRICAL	115-240 VAC, 50/60 Hz	
WEIGHT	67 lbs. (30.5 kg.)	

Computer Requirements

1. An IBM or Compatible Pentium 100 Megahertz PC or better.

2. Windows 95, 98, 2000 or NT installed.

3. A minimum of 10 Megabytes of free hard disk space.

4. At least 16 Megabytes of RAM. (32 Megabytes for Windows 2000 and NT)

5. A 2X CD ROM or better.

6. An 800 X 600 SVGA Monitor or better.

7. Parallel (Centronics) printer cable, no longer than 6 feet.

8. The Parallel Port must be set to the EPP (Enhanced Parallel Port) setting in the CMOS of the computer.

APPENDIX B - Supplies and Optional Hardware

The following supply items and optional hardware are available from your Astro Machine Distributor:

Supplies

Black Inkjet Cartridge	HP 51645A
Fast Drying Black Inkjet Cartridge	HP 6195A
Yellow Inkjet Cartridge	HPC6173A
Red Inkjet Cartridge	HPC6168A
Green Inkjet Cartridge	HPC6169A
Blue Inkjet Cartridge	HPC6170A
Versatile Black	HPC8842A

Optional Hardware

Various Conveyors Available

APPENDIX C – Software Options

Full 256 ASCII Character Set for AstroJet Printer

The AstroJet 1000 software uses the basic 128-character set to print the addresses. This speeds up downloading of the fonts and is more efficient. In some cases it may be necessary to use the entire 256 ASCII character set to print the addresses. European addresses that use accent marks over certain letters for example. In order to activate the entire 256 ASCII character set it is necessary to modify the registry file in windows. If you are not familiar with modifying registries in Windows, get help.

1. Click on START, then RUN. Enter "REGEDIT" in **Open:** then click **OK.**

2. Enter the following tree:

   HKEY_CURRENT_USER

       Software

           Astro Machine Corp

               AstroJet 1000

                   Options

                       Windows Char Set

3. Double Click on Windows Char Set icon.

4. Change "0" to "1". Then Click **OK**

5. Click on **Registry**, then **Exit** to exit the program and save the changes.

6. Open AstroJet Printer Control Panel and click on **Properties…**

7. Click on **Cache,** then click on **Flush Fonts** then click **OK**.

NOTE: You must flush the fonts and re-render them to get the special characters to print.

8. Reload the print job and print.

NOTE: Once this change is made it is permanent in the registry. To change it reenter the Registry and change the "1" to "0" then flush the fonts.

Reverse Printing

The default method of printing on the AstroJet Printer is referred to as the Forward printing. That is to say when you stand by the control panel of the printer the address being printed is readable as in the illustration to the right.

BULK RATE
POSTAGE
PAID
PERMIT#000

ABC INDUSTRIES INC
123 MICHIGAN AVENUE
CHICAGO, IL 60001

DIRECTION OF FEED

AstroJet Printer Control Panel Location
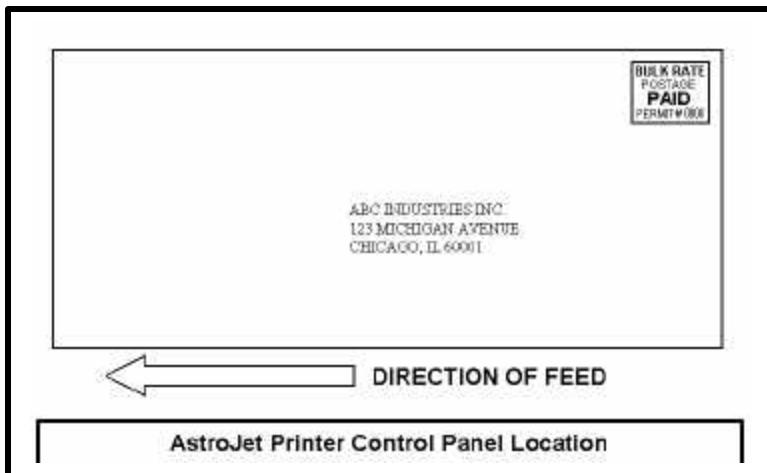
Sometimes it is necessary due to the media layout or to obtain the most efficient feeding of the material that the media be turned around. When this is done the address must be printed in reverse so that it appears right side up on the finished piece. This is referred to as Reverse printing. The AstroJet Printer accomplishes this in the software by reversing the address. While the direction of the media through the printer remains the same, the printing changes as in the illustration to the right.


DIRECTION OF FEED

AstroJet Printer Control Panel Location
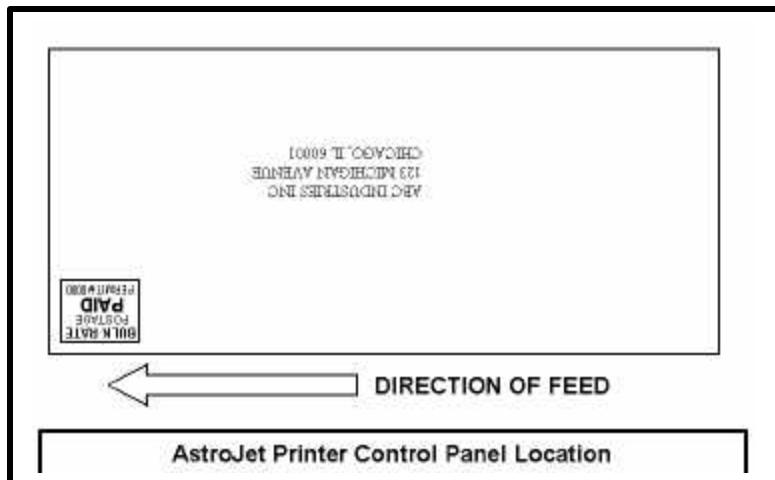
A template is supplied with the AstroJet Software to help you with laying out a job in Reverse printing. If you wish to create your own reverse template follow the instructions are below:

1. Open the "Layout Editor" and select the database you wish to use as you would for forward printing.

2. The layout screen will appear with eight print heads.

3. From the **Setup** menu select **Envelope Direction** and then select **Reverse**. The numbers at the side of the printhead guide lines will turn BLUE signifying that the template is in the reverse print mode.

4. From the **Setup** menu select **Print head**. The "Print Head Properties" window will appear. Turn off print heads 1, 2, 3, and 4. Click **OK**.
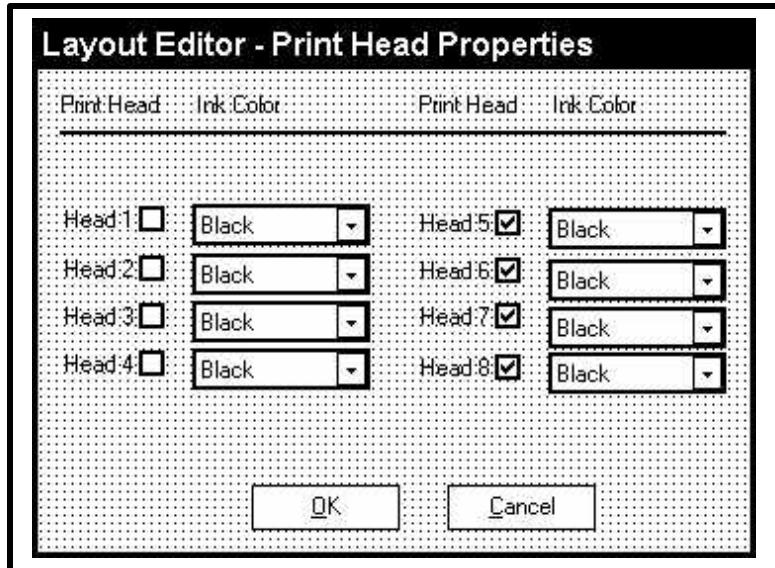
5. When you clicked **OK** the Layout Editor screen will now appear as below. The head numbers are in BLUE and Head 8 is the same as head 1, head 7 is the same as head 2, and head 6 is the same as head 3. Head 5 is the same as head 4. Simply set up your job as you would for the Forward printing mode. Remember that there is a 1 3/4-inch space between head 6 and 5 in the reverse mode as there is between heads 3 and 4 in the Forward print mode.

```
Layout Editor - Untitled                                      _ [] X
File  View  Fields  Setup  Tools  Help

[toolbar icons]

       1    2    3    4    5    6    7    8    9


  8
1 7
  6
2



3


  5


For Help, press F1        Database: 4Lines    Printer: AstroHP  Ratio: 2.30  Size: 9.50" x 4.13" (1.0X)  Orientation: Reverse
```
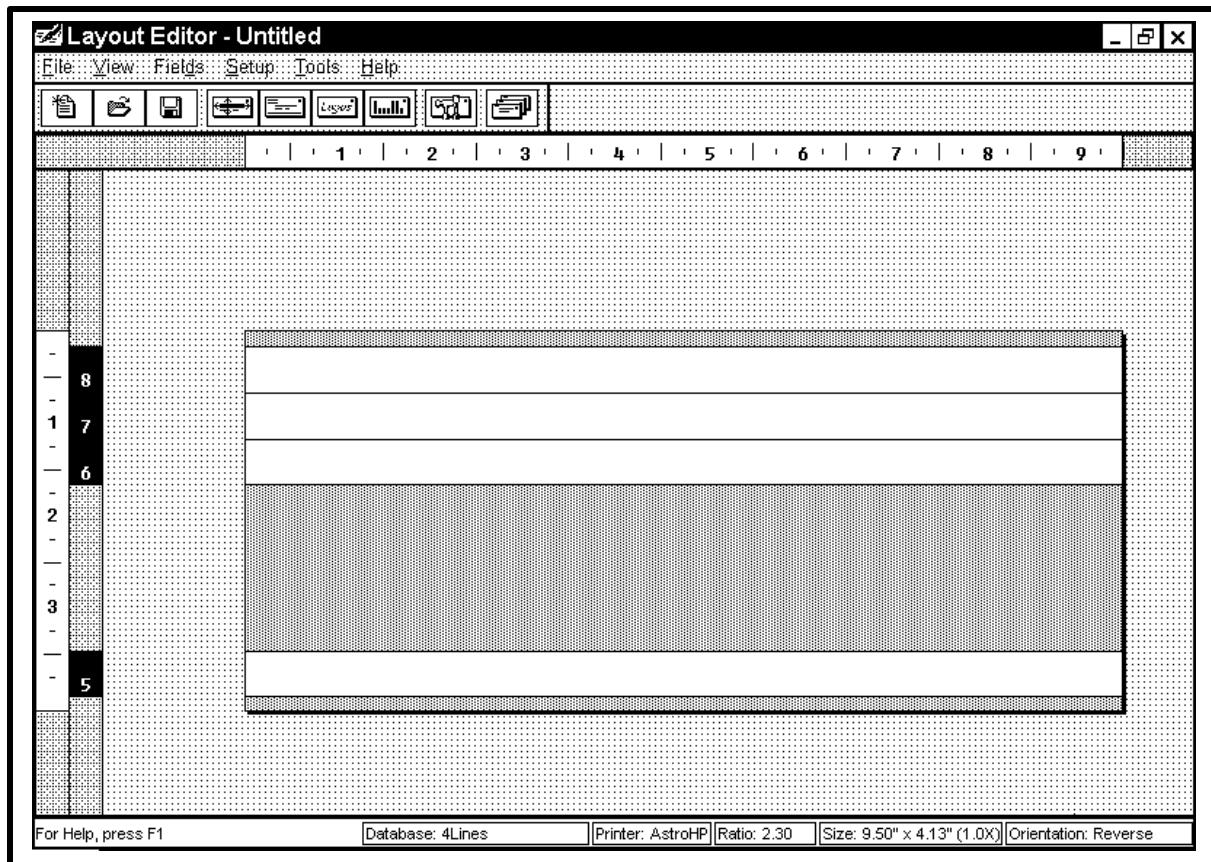
Printing without a Database

It is possible to print return addresses on envelopes, logos, and other information on media without a database. One application would be to put the return address on the flap of an envelope. To do this

select a the **New Template** icon or **New…** from **File** menu and when the Layout Editor – Select Database window appears deselect the "Does this template require a database?" Then click **OK**.

The "Layout Editor – Stock Properties" window will open. Select the size of the envelope and click **OK** as you normally would.

Click on **Setup** and then **Print head** and deselect Heads 5 through 8 as you would for a normal template. Then deselect head 4 as well for this example as we will be printing on a 6 3/4


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Layout Editor - Select Database

A template defines the basic layout and is dependent on the properties
of the database you intend to use.

Next, select a database to be associated with the new template.

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Some applications do not require a database to fill text fields, such as
constant labels.

        [ ] Does this template require a database?


        OK                    Cancel
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envelope which is only 3.5 inches wide and will not accommodate printhead 4 due to the required 1 3/4-inch space between heads 3 and 4. When you have completed these steps the layout should look like the one below.
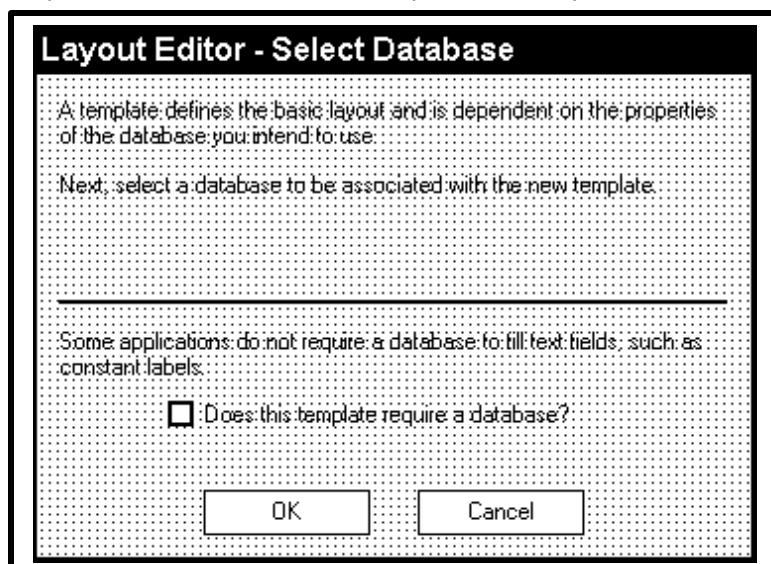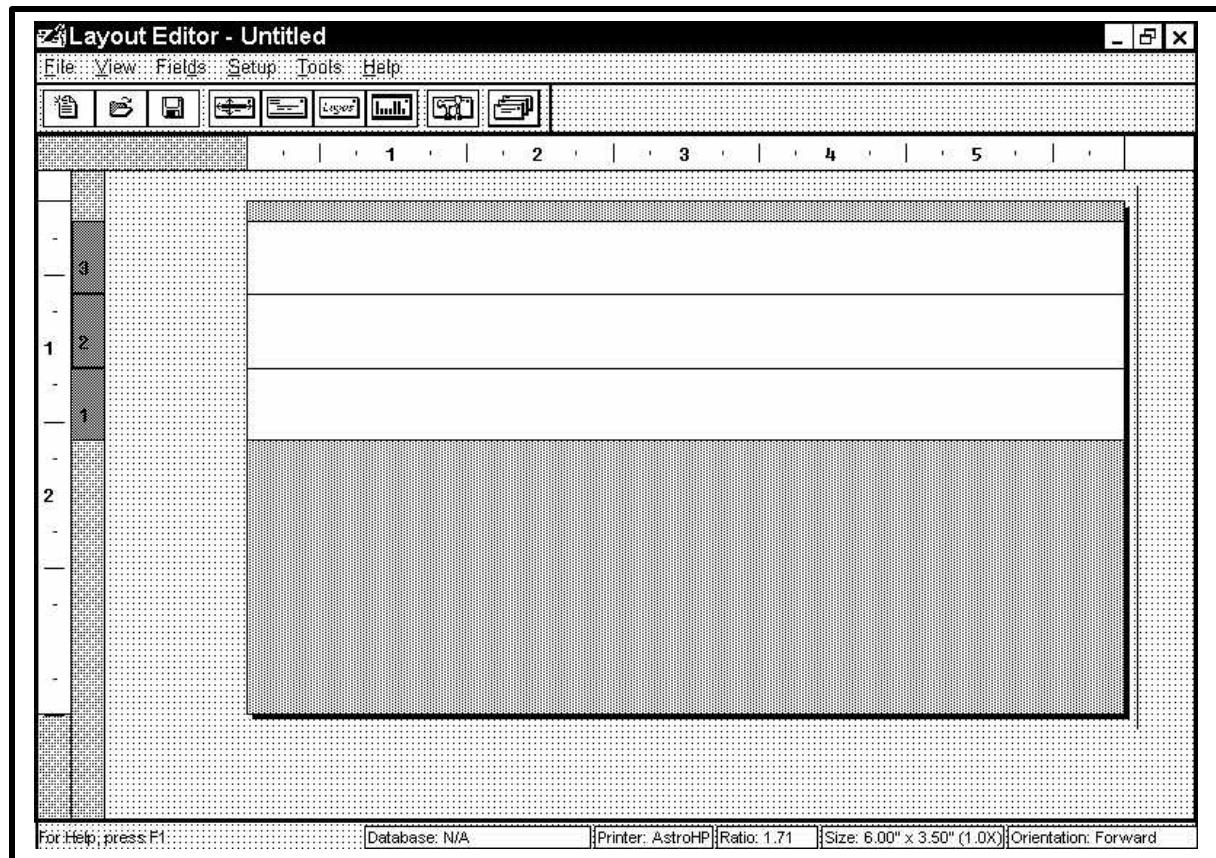
Notice that in the lower information line the Database says N/A meaning that no database is attached to this layout.

Continue with the layout by clicking on the **Text Field Properties** icon and activating a font. Click OK and "Data line1" will appear in the blotter area. Click on this and drag it to the place that you wish the information to appear on the layout, just as you would with a database field. When the "Data line 1" is positioned on the layout, double click on it and the "Text Field Editor – Field 1" window will open. Notice that there are no data base fields to choose from for the layout. Simply type in the information that you wish to print, select the style of type and type size and then click **OK**.
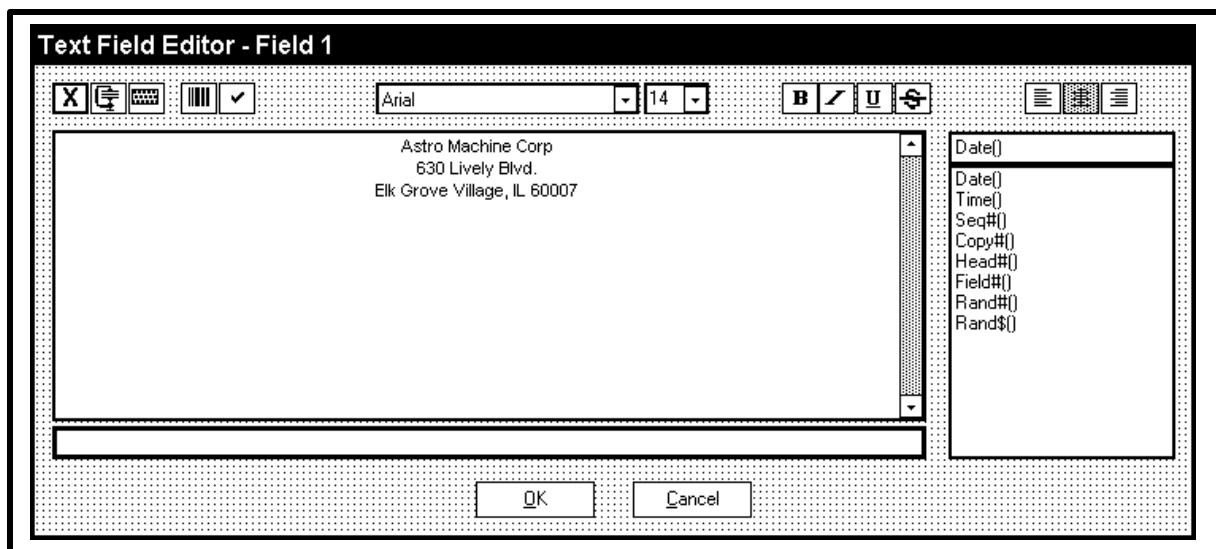
When you have completed the layout it should look like the one below:
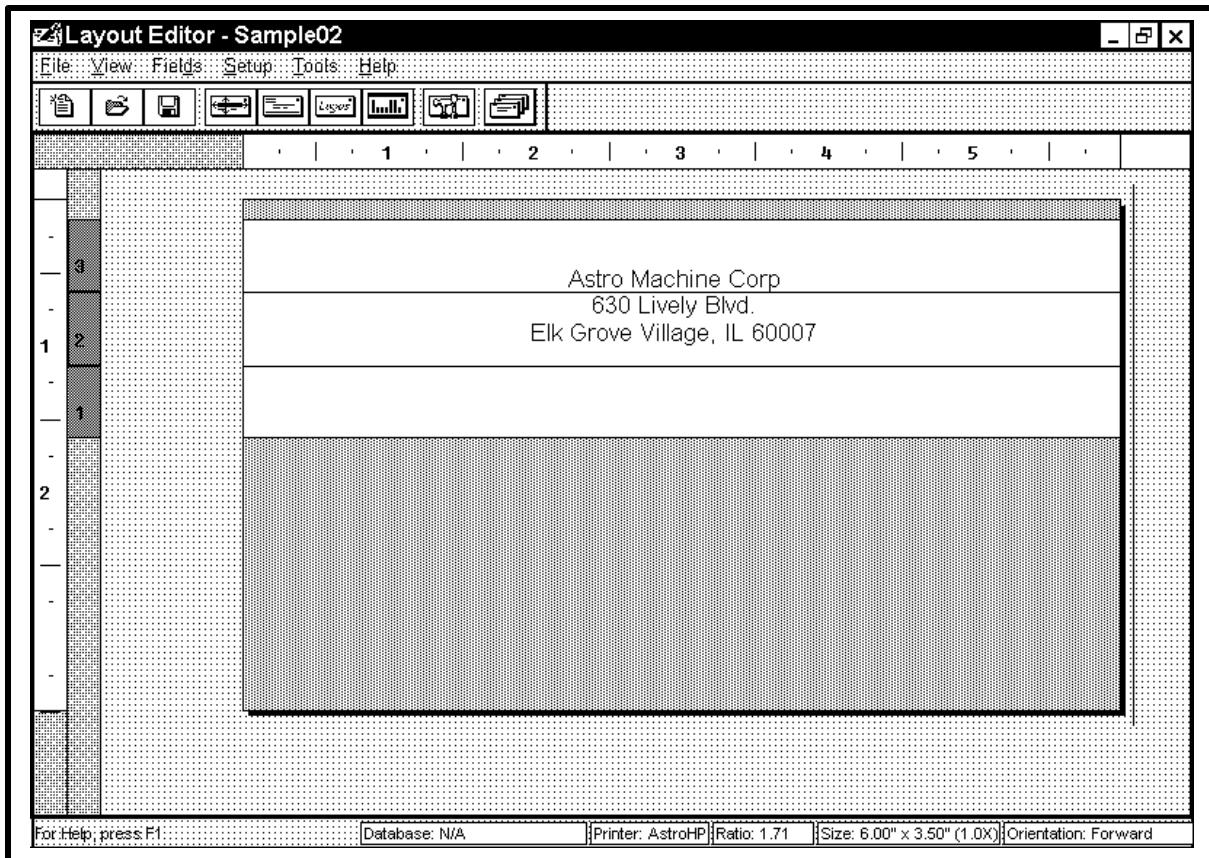
Save the template and then create a job by clicking on **File** and then **New Job…** to save the job.

Next turn on the printer and click on the ⬚ **Control Panel** icon. The control panel will open, then click on the ⬚ to load the job. You will note that no data will be shown in the "Current Database" window in the control panel.

When you click **GO**, the "Control Panel – Number of Copies" window will open. This window is used to select the number of copies to be printed. If you leave the "Unlimited [job stops when Stop button pressed]" selected, the printer will continue to print until you press the **SELECT** key on the printer or **STOP** in the Control Panel software. For our example we have deselected it and entered "500" in the box provided. This will permit the printer to print 500 copies then stop feeding.
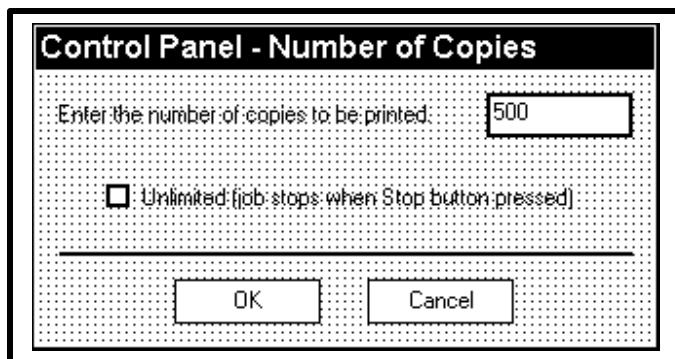
When you press **OK**, the Control Panel will become active. Pressing **GO** will start the downloading process and then the printer.

A screen shot of the Control Panel being used to print the sample job appears below.
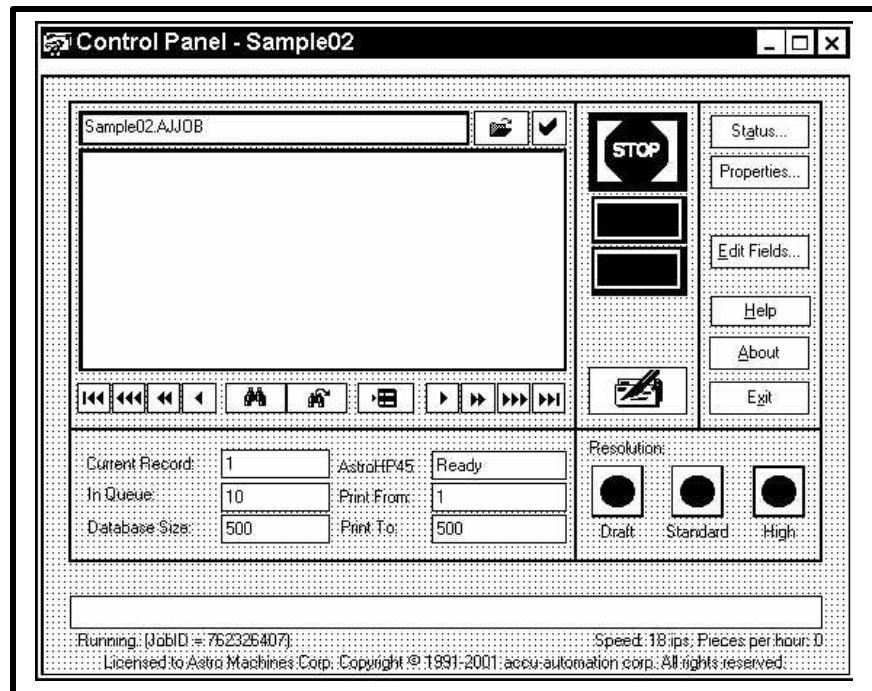
Special Insert Characters for Text Fields

Built in to the "Text Field Editor" are several special characters that can be used to increase the information on your layout. The special characters and their functions are as follows:

Date()
When inserted into your layout returns the Date set on your computer as "*month day, year*" **Example: Jun 11, 2001**

Time()
Places the time from the computer's clock on to your layout as "*Hr:Min AM or PM*" **Example: 3:30 PM**

Seq#()
This special insert will display the count of the records from 1 to the last record run regardless of the direction the database is run and print that number.

Copy#()
Returns the number of copies of the layout. The number is always 1.

Head#()
When placed on a particular head will print the number of that head on your document.

Field()
Will print the number of fields in your database.

Rand#()
Generates a random number from 1 to 99999 and places it on your printout.

Rand$()
Randomly generates an ASCII character and places it on your printout.

# Adding Instructions to the Operator

It is possible for an operator to change information on a mailing piece before it is printed without using the Layout Editor. A situation where the same basic mailing list and layout is used each month but some special message is changed would be one example.

In the sample below the piece used in the tutorial is modified so that a special message can be added when the mail list is run each month.

For this example we are going to have the printer change the month each time the job is run. This is done by setting up a layout and using the ▦ "Specifies that this field will be filed in by the Control Panel" icon to have the operator add information prior to printing. When this icon is activated a window will appear in the Control Panel requesting that something be added prior to printing.

In order to set the job up, do the following:

Create a job just as you would normally. Then create a Text Field for the information to be entered by the operator. Double click on the field and to open the "Text Field Editor – Field 3". Click on the ▦ icon. The window will change like the one below.
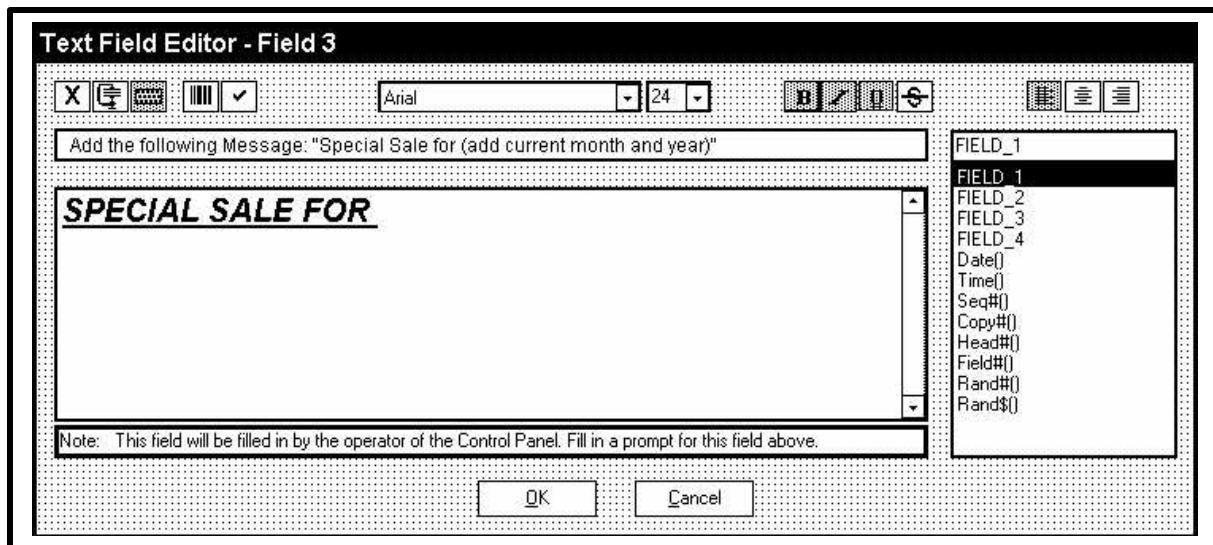
The top line is for the instructions to the operator as to what information is to be entered into the printout. The second line is for the information that will be changed when run. There must be something in this area for this to work properly.

When you open the Control Panel software and load the job the "Label Field Editor" window on the right will appear to instruct the operator as to what information is to be entered. Once the information is entered the operator clicks **OK**. Then click on **GO**, the

job then downloads and runs with the added information being printed.

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